# EXPLORING THE KN2000

By Lutz Deterra

Edited by
Philip Leader

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# INTRODUCTION

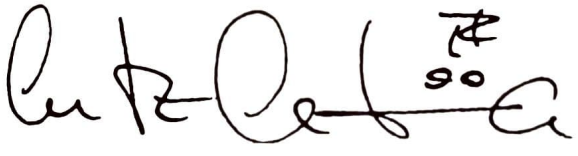
Technics has long been at the forefront of Single Keyboard development with successive models providing features which were attractive to Home and Professional musicians alike. Not long ago, in the era of the KN1000, many people were already wondering what it's successor would be like.

To be honest, after having studied the KN2000 extensively I was not sure that a User Manual was needed at all for this superb keyboard, as the KN2000's huge display actually ***leads*** the user through all necessary functions by itself.

But as an Owner's Manual tends to be quite general in it's description of features this User Manual will hopefully serve as a readily comprehensible guide and reference book to practical application of the KN2000's features.

In addition, you will find some interesting Composer exercises and helpful Midi set-ups on the disk provided with this manual.

I hope you enjoy reading the handbook and wish you successful exploration of the KN2000!



**Lutz Deterra.**

# Editor's Preface

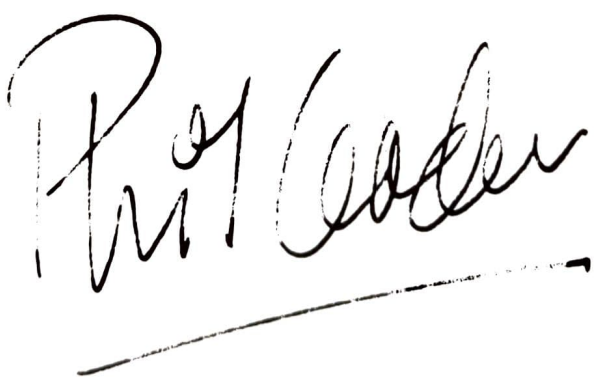
The KN2000 has proved to be one of the most successful Single Keyboards of it's type ever made. It features ground breaking technology applied in as simple a way as possible to provide home and professional musicians alike with a wide scope for creativity.

This book is not designed to replace your owner's manual, but to complement it giving you more ideas about why to use a feature rather than just how. As such you may find it useful to read this book with the owner's manual on hand for reference.

Each feature detailed is broken down into categories depending on the way the feature is presented on the KN2000 itself. You will find it beneficial to read each section in total rather than just using the book as a reference manual, as each subsequent part of a chapter guides you through the many applications.

To keep the manual consistent with the terminology used in the KN2000, the word MEASURE is used instead of BAR, and note lengths are described in the form Quarter Note, Eighth Note, Sixteenth Note etc, instead of Crotchet, Quaver, Semi-Quaver.

We hope that you find Exploring The KN2000 interesting and beneficial!



**Philip Leader**

# Operating the KN2000 in general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# 1.0 THE CONTROL PANEL

Basic modes of operation, for instance choosing sounds or rhythms or starting patterns or background sounds, have never really posed substantial problems on Technics Keyboards. With the KN2000, many functions are operated via the large LCD screen located in the middle of the keyboard. Unlike previous Technics keyboards the KN2000 display has become much more a central control panel instead of only showing information (for example. sound choice). Also, this display *leads* the user of the KN2000 through many different functions, mostly because complex processes can now be displayed more graphically.

The LCD display itself has many buttons around it which relate to functions in the screen. The functions change depending on the particular part of the keyboard that you are using.

In consequence the buttons around the screen are what are known as 'soft buttons'. In other words their function changes depending on what appears in the screen. This enabled Technics' designers to include many more functions on the KN2000 than would normally be available with physical buttons.

Quite often in this manual reference is made to 'pushing a button marked.....'. In this case press the button closest to the name or indicated as relating to the name. If the green LED next to the TEMPO/PROGRAM wheel is lit during any procedure it can be used to alter the selected parameter, often making the programming process much quicker.

## 1.1 DISPLAY HOLD

There are several displays that appear for only a short time and then disappear by themselves. Take for instance the SOUND GROUP display: After pressing a SOUND GROUP button the KN2000 offers you a choice of several sounds - however, the display stays in the screen for a limited time (about 5 seconds). Then the main page reappears as it has priority for normal playing operation. If you want to take your time in choosing a sound press the DISPLAY HOLD button after you have pressed a SOUND GROUP button. Now the selection of sounds remains in the display for as long as you wish - until you press DISPLAY HOLD again, or the EXIT button.

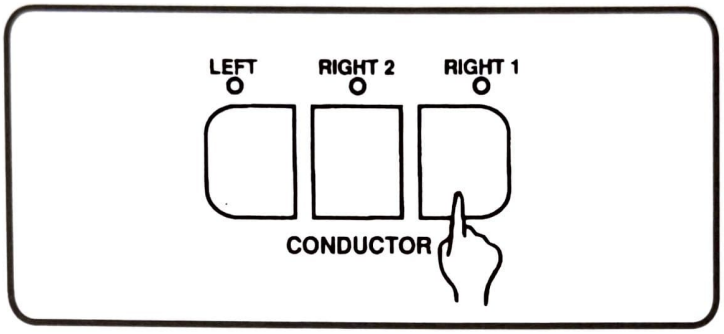
The so-called 'EASY SETTING' functions (described in more detail on page 7) may also be held with the DISPLAY HOLD button.

## 1.2 EXIT

EXIT is one of the most important and most frequently used buttons, as it allows you to leave a particular menu or process.

When EXIT is pressed the KN2000 will always leave the menu or process currently in use, returning to the previous page.

## 1.3 CONDUCTOR




The KN2000 has three parts which are used for performance on the keyboard (as opposed to recording in the Sequencer or playing over Midi). The CONDUCTOR allows you decide how these parts are configured on the keyboard.

The three parts are:- LEFT, RIGHT1 & RIGHT2. This means that you can choose a sound for the left part of the keyboard (to the left of the split point) and two sounds for the right part (to the right of the split point).

To be able to play a sound on the left part of the keyboard, press the LEFT button which works like an on/off switch. To be able to play two sounds on the right part of the keyboard, press RIGHT1 and RIGHT2 simultaneously (if not the CONDUCTOR will change from RIGHT1 to RIGHT2, or the other way round).

This way you can create 6 different CONDUCTOR combinations:

**LEFT + _____ + RIGHT1**
**LEFT + RIGHT2 + _____**
**_____ + RIGHT2 + RIGHT1**
**_____ + _____ + RIGHT1**
**_____ + RIGHT2 + _____**

The PART SELECT buttons above the CONDUCTOR buttons allow you to select which part the SOUND GROUP buttons will alter. For example if you want to change the LEFT sound press PART SELECT - LEFT, to change the sound in RIGHT2 press PART SELECT - RIGHT2 etc.

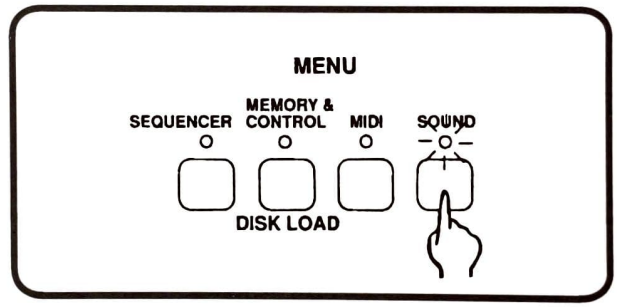
*If you want to change from one sound to another during a piece, use PART SELECT to pre-select the sound to which you want to change, whilst playing. For example if you are playing a sound in the RIGHT 1 part, press PART SELECT - RIGHT2 and take your time to choose your next sound while playing. To change sound just press the RIGHT 2 CONDUCTOR button at the appropriate moment.*

**HINT!**

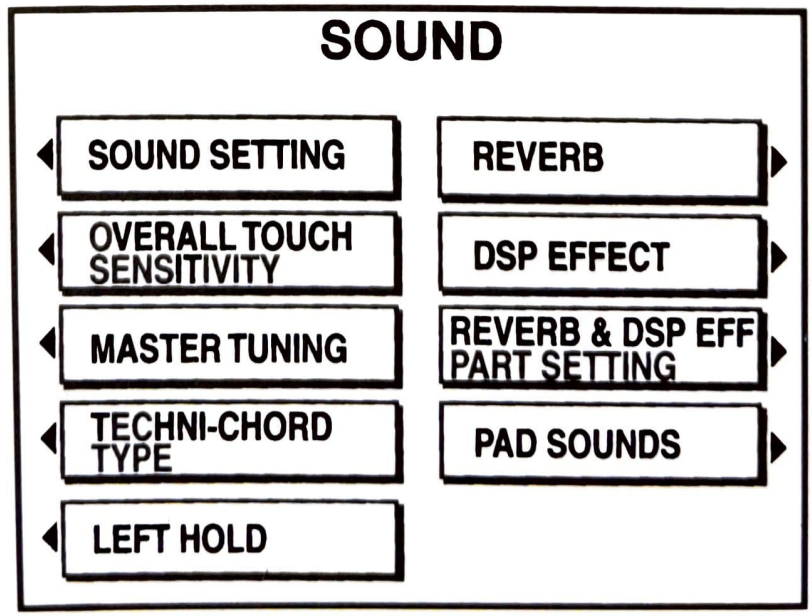
# 1.4 LEFT HOLD

The KN2000 offers you the possibility to hold the sound in the LEFT part. This means that your chosen LEFT sound (for example: strings) will be automatically held after you have pressed the keys once, even if your left hand has left the keyboard.

In the KN2000's default setting LEFT HOLD is turned off, so to enable LEFT HOLD first press the SOUND menu button.




When the Sound button is pressed the display changes and shows you 9 different switches for the SOUND section.

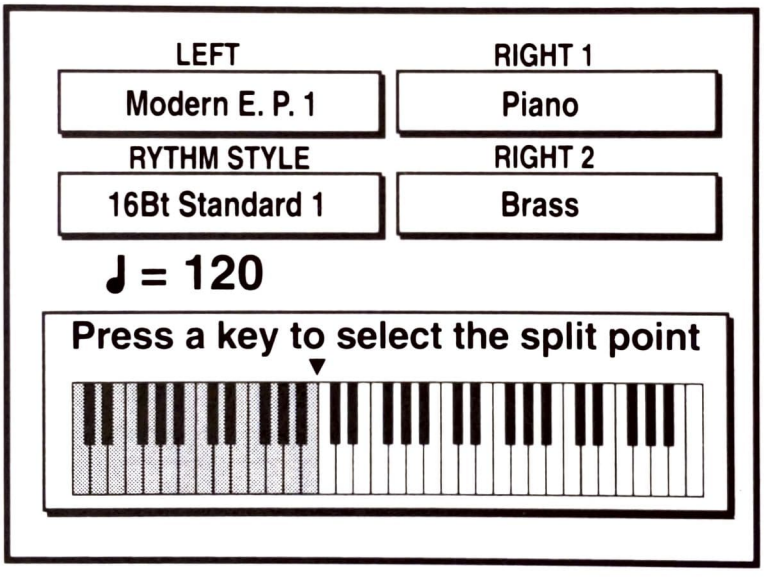


Now press the button next to the words LEFT HOLD in the screen and then turn LEFT HOLD on. Having switched LEFT HOLD on, press the SOUND menu button once more and you will have left the SOUND menu with the LEFT HOLD function activated.

## 1.5 SPLIT POINT

The KN2000 has three fixed split points and one free split point. To set the split point is very easy: To select one of the three fixed split points just press the SPLIT POINT button repeatedly until the LED for the desired position is lit.

After reaching the last LED (G3) if you press the SPLIT POINT button once more no LEDs will be lit, but a split point will be shown in the screen. The free split point is now selected. To choose your own split point, just press and hold the SPLIT POINT button for a few seconds. The display will then show you the present free split point.




You can now choose the split point wherever you like by pressing a key on the keyboard. The new split position will be indicated graphically on the display. The easiest way to leave this process is by pressing the EXIT button.

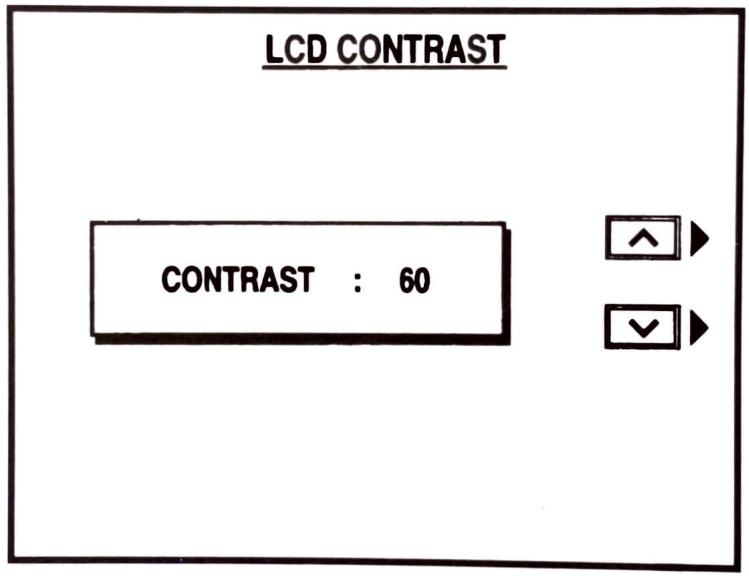
**HINT!**

***Be sure not to touch the keyboard again immediately after choosing the split point. The KN2000 registers even the slightest touch of the keyboard as a split point setting; so press EXIT immediately after setting.***

# 1.6 SCREEN CONTRAST

This control changes the contrast setting for the display. When your KN2000 has been switched off over a longer period of time you may note that the display is much too dark. Or you might be playing in a place with unusual lighting, requiring you to adjust the display contrast.

The reason for this is that the display is a Liquid Crystal Display (LCD) which reacts to external influences. The contrast on your display will change according to changes in temperature, as when the keyboard has been switched off for some time. Therefore you may have to readjust the contrast after you have played for some time and the KN2000 has reached its operating temperature. This becomes more apparent for example when you have transported your keyboard in a car during the colder seasons and then play it in a heated room.




The default value for CONTRAST is >40<. Press the CONTRAST button (on the left-hand side of the display) and set the display contrast with the two switches on the left-hand side or, even more easily, with the TEMPO/ PROGRAM dial. To return to the main page, press EXIT.

# 1.7 EASY SETTING FUNCTIONS

The KN2000 has a lot of programmable function settings to offer, all of which can be called up in the display via the various different menus. To let you reach the settings that you use most often more easily, Technics has installed a sort of 'turbo charged' function which we call 'EASY SETTING'.

Let's assume you want to change the REVERB setting. Normally you would first have to go into the Sound menu and the select REVERB. But there's

a much easier way: Press and hold the REVERB button for some seconds, and the KN2000 will skip the menu selection and go directly to the REVERB setting screen.

Here's another example with the TECHNICHORD function in which you can choose one of the 13 TECHNICHORD types. Here too, press and hold the TECHNICHORD button for a few seconds, and the keyboard will turn directly to the TECHNICHORD selection screen. EASY SETTING saves you a lot of time, as you don't have to scroll through many menu pages any more.

EASY SETTING ***Turbo Charges*** your programming with the following functions!:

**DIGITAL REVERB**
**DSP EFFECT**
**PANEL MEMORY**
**MUSIC STYLE ARRANGER**
**SPLIT POINT**
**TECHNICHORD**
**MEMORY & CONTROL / DISK LOAD**

With PANEL MEMORY, to get directly to the mode selection page press and hold the red SET button.

**ATTENTION!**

**If after a few seconds you have not chosen a setting on the selection page the display will automatically return to the main menu. However, with the DISPLAY HOLD button (on the right-hand side of the display) you can hold any of the EASY SETTING pages as long as you like. Then the display will return to the main menu only when you press DISPLAY HOLD again or EXIT, giving you more time to make your settings.**

# Sounds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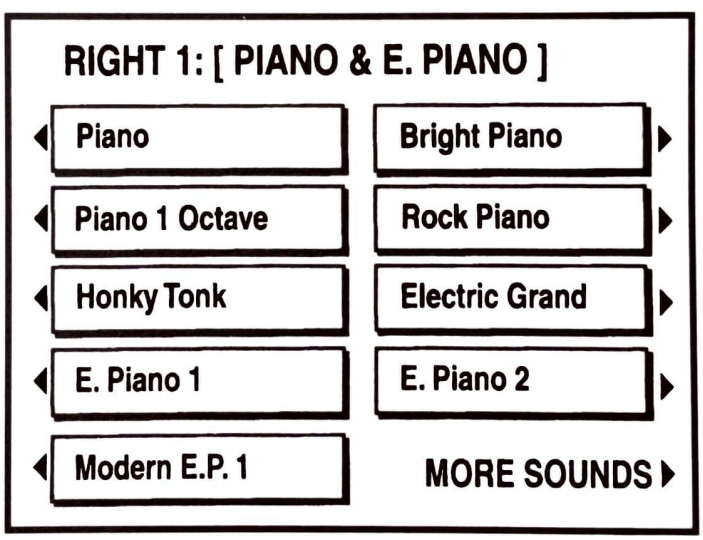
# 2.0 Sounds in general

The KN2000 has 250 sound presets which are divided into SOUND GROUPS. These are located on the panel to the right-hand side of the display. In addition to these 250 sounds there are also 36 SOUND MEMORIES divided into MEMORY A and MEMORY B.

These SOUND MEMORIES have been provided with preset sounds, but they also serve as storage space for your own SOUND EDIT creations. The factory sounds provided in the SOUND MEMORIES are also only edited preset sounds - sounds created using SOUND EDIT from the sounds which are in the keyboard.

## 2.1 Selecting Sounds

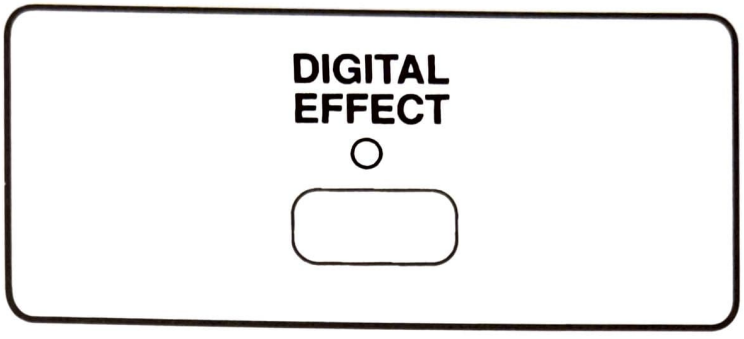
If you press any SOUND GROUP button on the PANEL the display will show you a selection of the 18 available single sounds in that group.




In this example you see the selection of sounds in the 'PIANO' sound group. 9 of the 18 sounds on display can now be called up directly. To find the other piano sounds, press MORE SOUNDS. Now the other 9 sounds are also available. To return to the first page of sound selections, press RETURN. All the other SOUND GROUPS work the same way. The sounds are structured so as to provide the main sounds of a sound group on the first page and on the second page (under MORE SOUNDS) the more extravagant or exotic sounds. Therefore, you may find the sounds on the first page sufficient and will not always have to select MORE SOUNDS.

## 2.2 About Digital Effects

With some sounds you will find the DIGITAL EFFECT already switched on, with others not. This is because not every sound needs DIGITAL EFFECT, although for some it is an integral part of the sound.




Let's take one of the Electric Pianos. The Electric Piano sound is enhanced by DIGITAL EFFECT which provides a gentle CHORUS. Of course this effect may be switched off again by pressing the DIGITAL EFFECT button. With the organ sounds ***(except PIPE ORGAN 1/2!)*** the DIGITAL EFFECT button does not work as an ON/OFF switch. Here the DIGITAL EFFECT provides an Organ Tremelo effect and the switch is used to set it to fast or slow.

Even sounds that do not automatically select Digital Effect have an appropriate effect set up for them. This means that when the DIGITAL EFFECT is switched on in addition a suitable effect will be heard. A good example is the sound BANJO (SOUND GROUP: SPECIAL PERC). By pressing the DIGITAL EFFECT button a Repeat effect provides the characteristic reiteration of the BANJO sound.

**HINT!**

***Go through some of the sounds which have no DIGITAL EFFECT switched on and switch it on. You may find some pleasant changes that are more to your taste.***

## 2.3 Some Detail About Parts

The KN2000 is basically divided into 16 parts. Of these parts three are most commonly used on the keyboard itself, RIGHT 1, RIGHT2 and LEFT. These could also be thought of as parts 1, 2 and 3, because the other internal parts are named 4 - 16. (Part 16 is reserved for Drums).

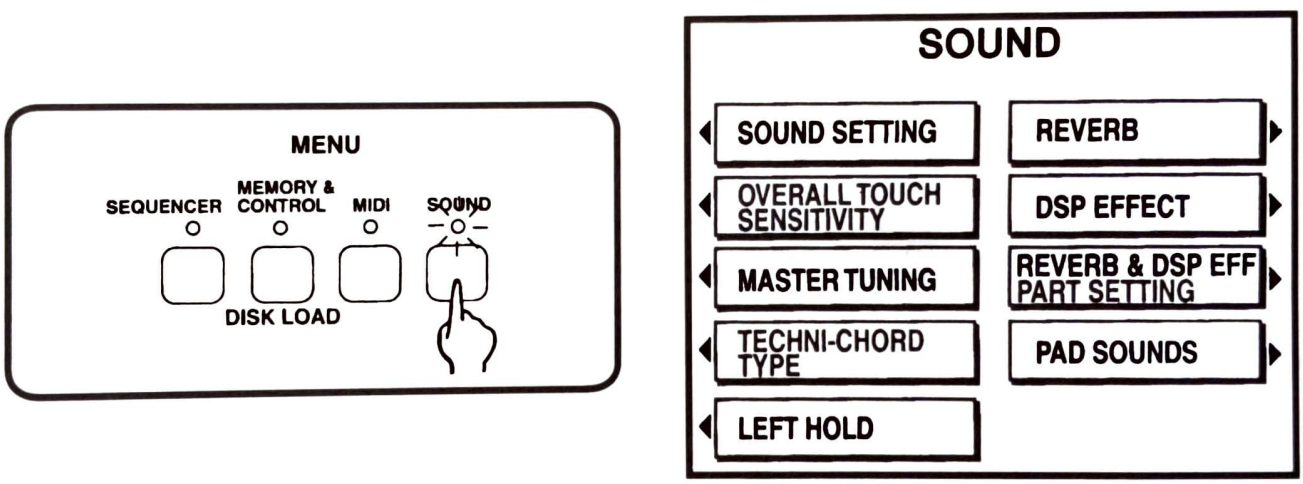
These parts are available for Midi (perhaps playing the KN2000 from an external sequencer like a Computer) or for use in the KN2000's Sequencer. You could for example assign a different part to each of the 16 tracks of the KN2000's Sequencer and programme from an orchestral score, with a different sound on each track.

The KN2000 has additional parts for Auto Play Chord, Accomp 1, 2 and 3 and Bass and other special parts such as Background Sounds.

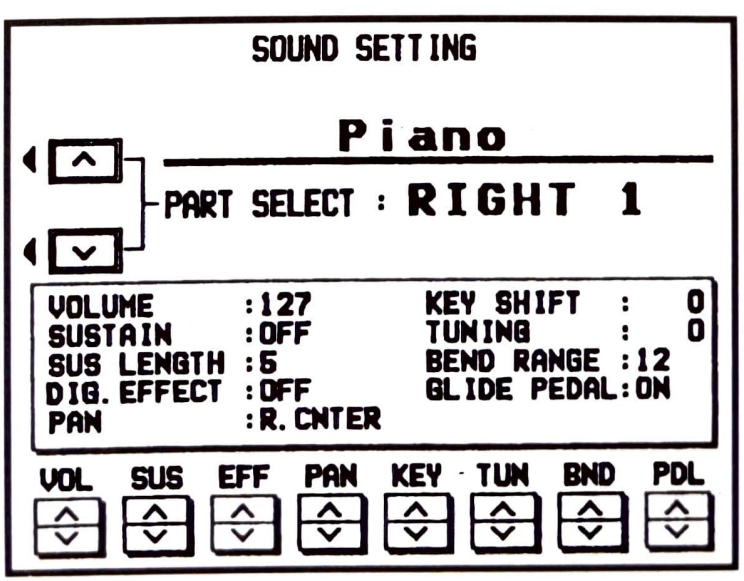
## 2.4.0 SOUND SETTING

There is a master screen for each part of the instrument which shows how the part is set up (Sound selection, Volume etc) and gives you some further flexibility in altering the part. The SOUND SETTING screen is found in the SOUND menu.

Press the SOUND menu button




and then select SOUND SETTING in the LCD screen.



The top part of the screen shows you the sound selected and the part. The two Up/Down PART SELECT buttons on the left of the screen allow you to scroll through the different parts.

## 2.4.1 SOUND SETTING functions

The box in the middle of the screen is for information and shows you the current settings for the following functions:-

| | |
|---|---|
| **VOLUME** | *Balance* |
| **SUSTAIN** | *On/Off and Sustain Length* |
| **DIGITAL EFFECT** | *On/Off* |
| **PANNING** | *Position of the sound in the stereo spectrum* |
| **KEY SHIFT** | *Transposition of the part, not the rest of the keyboard* |
| **TUNING** | *Fine tuning* |
| **BEND** | *Pitch Bend range for each part* |
| **PEDAL** | *Whether the Glide Pedal works on this part* |

## 2.4.2 How to alter each SOUND SETTING function

At the bottom of the screen there is a series of switches which allow you to alter each of these functions. The balance buttons under the screen work as On/Off or +/- buttons for each function, or once you have selected a specific function with the balance button you can use the TEMPO PROGRAM wheel for quicker access.

**VOL:** Press the buttons under the word VOL and you can alter the volume of the part. This function duplicates the Balance control on the main screen.

**SUS:** Press the buttons under the word SUS and you are given two options in the screen, SUSTAIN ON/OFF and SUSTAIN LENGTH. Each option has an arrow pointing to a button on the left of the screen so, press the button there to highlight the function that you want, and then use the balance buttons to alter the value.

*The SUSTAIN LENGTH of some Piano type sounds is not affected by altering the SUSTAIN LENGTH parameter here, because the sounds have a special decay characteristic. If you want this function to work you must first edit the Piano sound. (See:* **Sound Edit 6.5.6 Controllers)**

**EFF:** This function is a simple On/Off switch for Digital Effect.

**PAN:** Pan allows you to set the position of the sound in the stereo spectrum, in one of five locations, Left, Centre Left, Centre, Centre Right and Right. This function is very useful in combination with the Sequencer to place the sounds in their logical location. For example High Strings could come from the Left, Middle Strings from the Centre and Bass Strings from the Right.

**KEY SHIFT:** Allows you to shift the pitch of a part by +/- 1 octave in semitone steps. This might be useful if you were recording in the sequencer from an orchestral score. If for example you were playing a Bb Clarinet part you could just set the KEY to +2 (plus one tone) The transposed Clarinet part would then sound the correct notes.

**TUNING:** You can fine tune a part, maybe to create an orchestral effect or a novelty effect when layering two parts (for example Right 1 and Right 2 both with Acoustic Piano for a Honky Tonk effect).

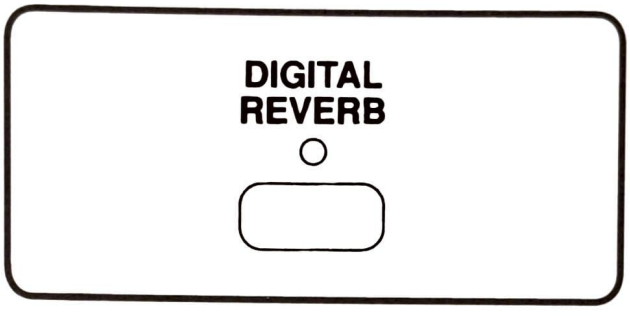
**PITCH BEND RANGE:** You can have a different Pitch Bend Range for each part. The most common range is 2 (semi-tones) however you might want to use one part with a wider range, say 5 for a Dixieland Trombone 'portamento'. You can set a range of up to one octave.

**PEDAL SETTING:** If you have a footswitch set to GLIDE, you can set with this function whether this part is affected by it.

# 2.5 REVERB

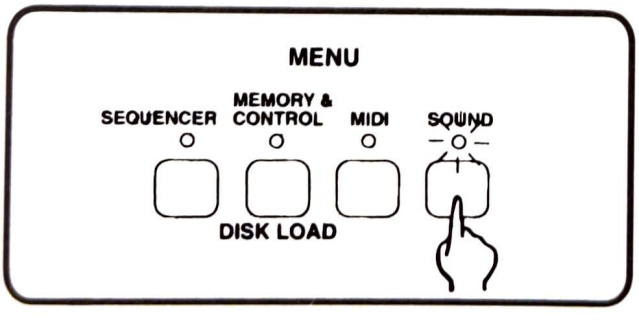
What would a keyboard be today without reverb? It is this effect that really completes the sound of each instrument. You will probably want to change the reverb setting to achieve different types of effects.

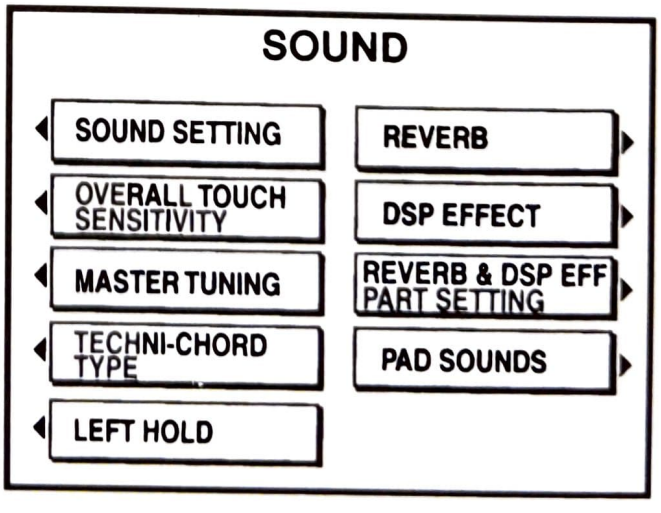
The KN2000's reverb is very easy to operate. The master reverb switch is located above the SOUND GROUP buttons. This switch allows you to turn reverb on and off for the whole keyboard. Reverb can be added only to some parts or sounds. For more information turn to 'Part Setting of Effects' and to 'SOUND EDIT'.

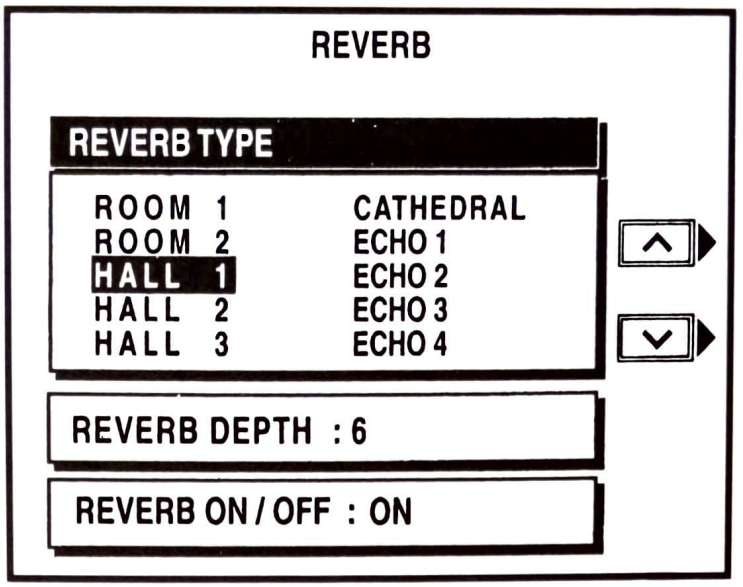



There are two ways to change the reverb settings. First the easier one: Press and hold the REVERB button for a moment for the display to change to REVERB settings. As this process is an EASY SETTING FUNCTION the display will return to the main page automatically after a few seconds. To hold the page for further use you should therefore press the DISPLAY HOLD button.

Another way to arrive at the REVERB settings is by first pressing the SOUND menu button and then pressing the button marked REVERB in the SOUND main menu.






In the upper box labelled REVERB TYPE you will find various types of reverb which you can call up with the Up/Down keys on the right edge of the display.

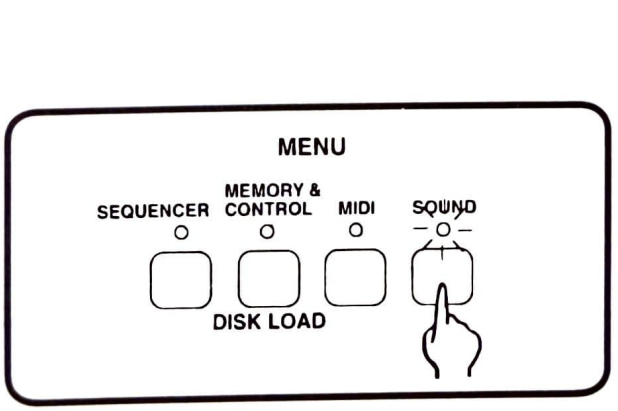
**REVERB DEPTH** allows you to set the desired intensity of reverb.

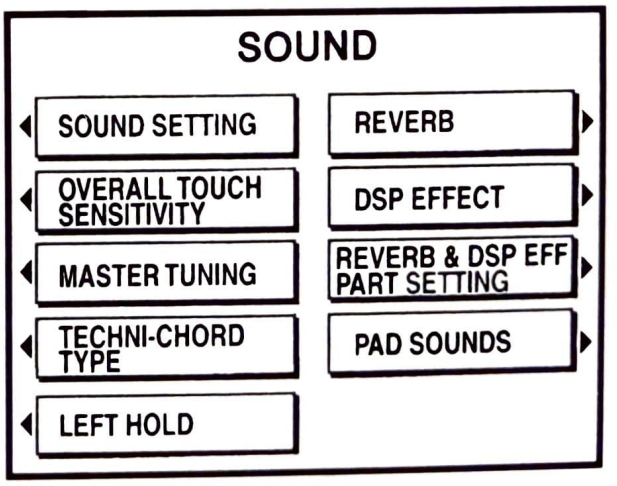
**REVERB ON/OFF** is an additional On/Off switch for this effect.

## 2.6 Part Setting of Effects

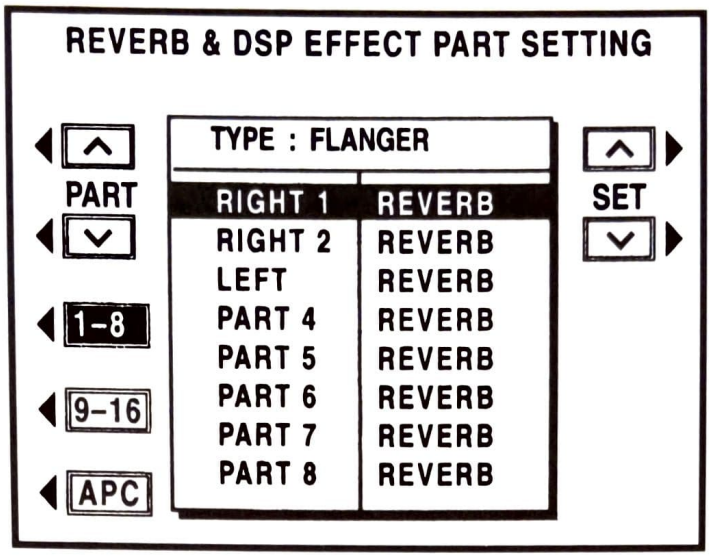
In addition to the main REVERB switch which turns on the reverb effect for the whole keyboard, the KN2000 offers you the possibility to switch on the REVERB and DSP effects for individual sound parts.

To do this, press the SOUND menu button and then press the button marked 'REVERB & DSP EFF PART SETTING'.




Now the display allows you to make your desired settings.




In the big box in the centre you see a list of the individual parts (RIGHT1-RIGHT2-LEFT-PART4-...). To get to the other parts (9-16) just press the 9-16 button on the left edge of the display. By pressing the 1-8 button you return to the previous parts. With APC you can also get to the parts of the automatic accompaniment.

With the two PART switches on the upper left hand edge of the display you can go through the individual parts. To do this faster you can also use the TEMPO/PROGRAM wheel to scroll down.

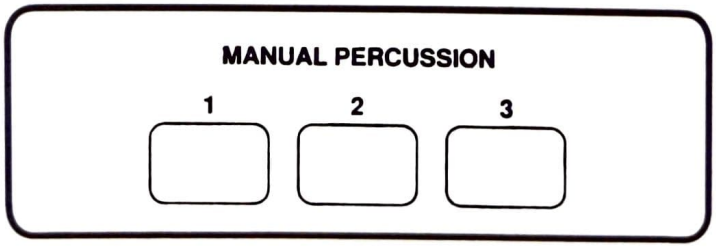
Next to the parts (on the right hand side under SETTING) you can see which effect is presently set for each part. You will probably read 'REVERB' under all these settings as the reverb effect has been set for all parts. To switch off the reverb for any part you have to press the lower of the two SET switches (right-hand edge of display) once until 'OFF' appears next to the part.

Another possible part setting is the 'REV+EFF' setting. With this the reverb and the DSP effect are set for the part.

When you have finished your settings just press the 'SOUND' menu button again.

# 2.7.0 Manual percussion PAD Sounds

The MANUAL PERCUSSION function is mainly used to assign different drum sounds to the MANUAL PERCUSSION pads.



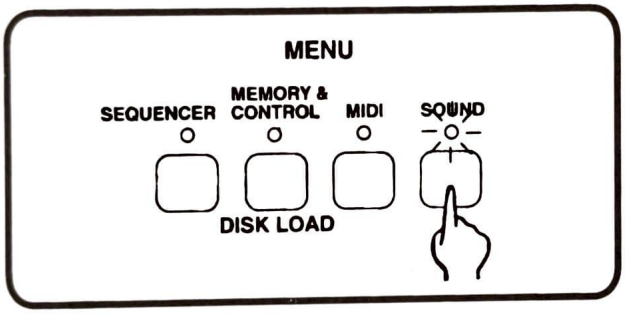
It is often overlooked that these finger pads can also be used as switches for a lot of functions. Let's take a first look at the basic sound functions of the pads.

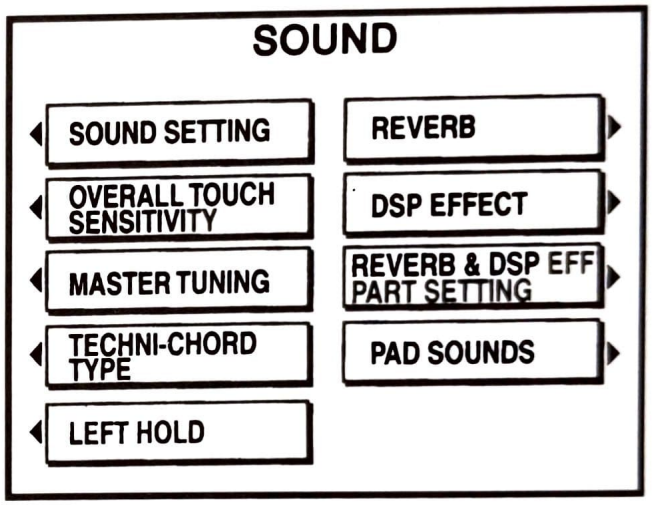
## 2.7.1 PAD Sounds Setting

When you first turn on the KN2000 or initialize it you will find the following sounds on the PADs:

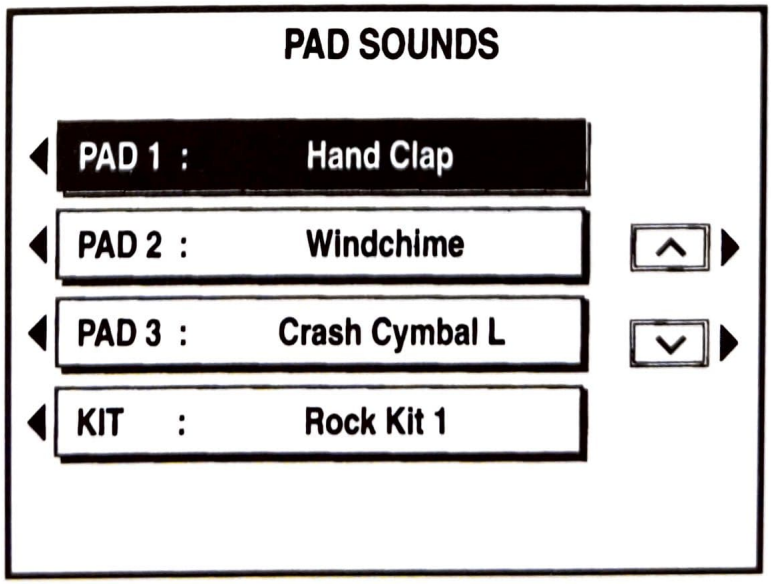
**PAD 1** Hand Clap
**PAD 2** Windchime
**PAD 3** Low Crash Cymbal

This choice of sounds can be changed through the display menu. Press the SOUND button on the right-hand side next to the display.

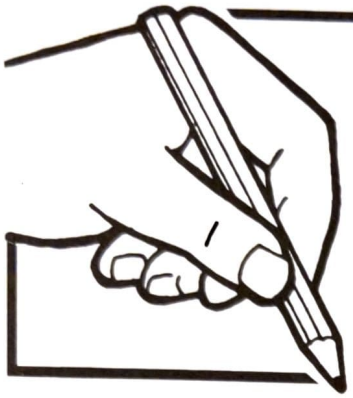



Press the button in the screen labelled PAD SOUNDS. The display now shows you the individual pad contents, plus a button in which you can choose which of the 16 different drum kits (see also SOUND group KEYBOARD PERCUSSION) is to be used as sound source for your PAD settings.



Select PAD1 and to choose a new drum sound. To do this use either the switches on the right-hand side or (more easily) the TEMPO/PROGRAM wheel. To check, press the finger PAD1 and you will hear the sound you have just chosen.
Proceed in the same way when choosing a drum kit. To complete this process press the SOUND button once more.

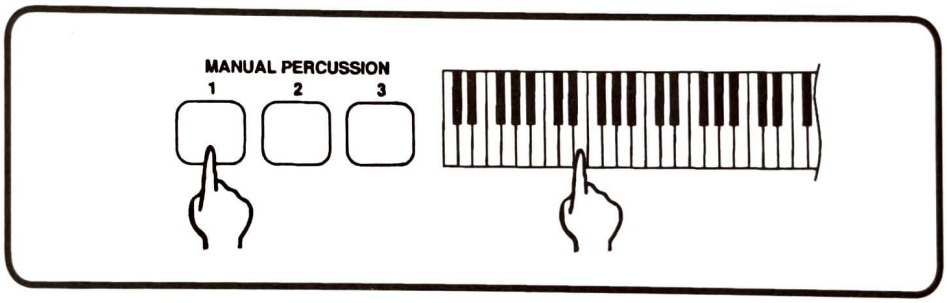


***The Pad sound setting becomes interesting when you choose the Sound Effect Kit as drum kit. Here you can find some funny PAD settings.***

**HINT!**

*Try:* *PAD 1* *Steam Whistle (E3)*
*PAD 2* *Telephone (F3)*
*PAD 3* *Little Dog (Ab4)*

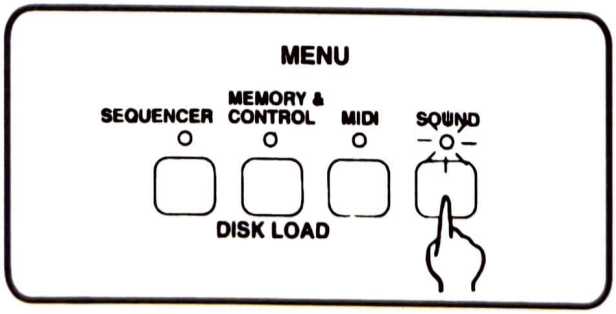
There is an even easier way to select the percussion sounds (from the drum kits) for the manual pads. First choose a drum kit from the 'KEYBOARD PERC' SOUND GROUP. Then press a PAD button and at the same time keep the key with the desired sound pressed for about 2 seconds. The percussion sound automatically appears on the chosen manual PAD.

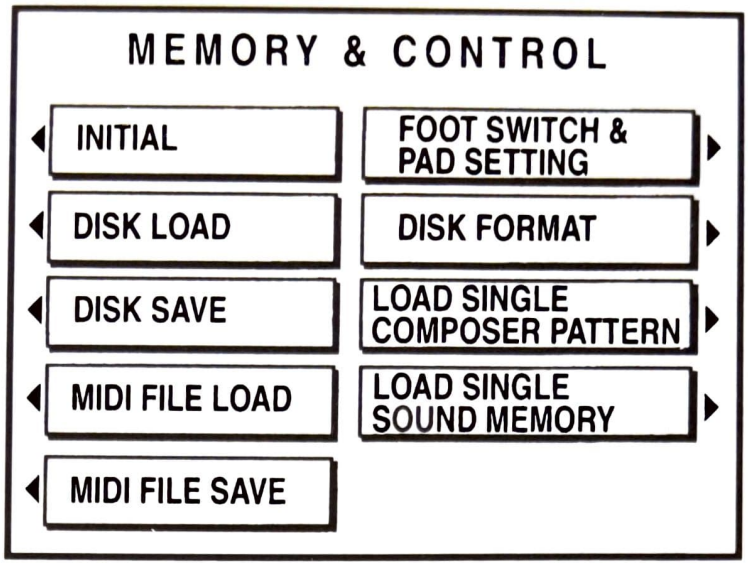



## 2.7.2 Setting the PADS for other functions

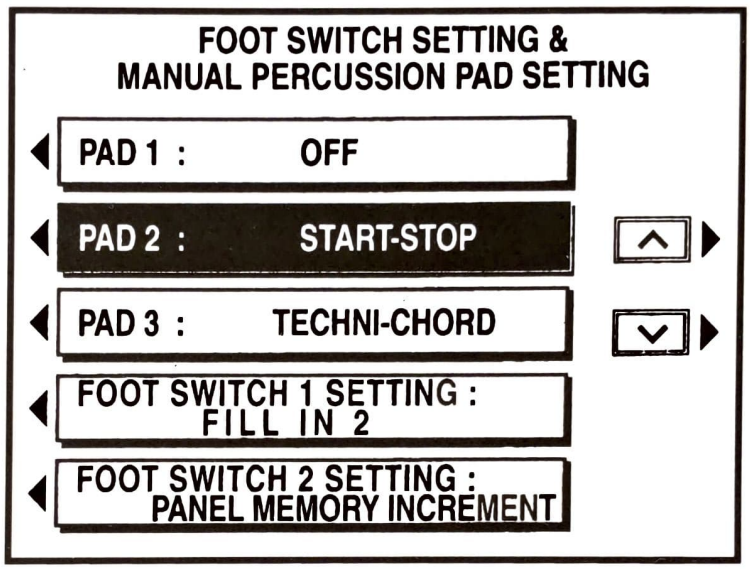
In addition to the sound setting the manual PADs can also be set with a number of control commands. You can, for instance, switch on the Digital Effect through PAD1 or switch into one of the 24 Panel Memories. These PAD control functions were established to make important change-overs easily accessible to the left hand as well as the right hand.

To set such commands on the PADs, first go into the MEMORY & CONTROL menu by pressing the button (on the right-hand side next to the display).






Now select FOOT SWITCH & PAD SETTING.


FOOT SWITCH SETTING & MANUAL PERCUSSION PAD SETTING
PAD 1 : OFF
PAD 2 : START-STOP
PAD 3 : TECHNI-CHORD
FOOT SWITCH 1 SETTING : FILL IN 2
FOOT SWITCH 2 SETTING : PANEL MEMORY INCREMENT

On the next page you will find once more 3 buttons marked PAD setting. All 3 are set OFF, as no choice for pad function has yet been made. Select PAD1 and choose the function that you want the PAD to perform with the switches on the right-hand edge of the display or with the TEMPO)PROGRAM wheel.

# ATTENTION!

**If you assign a function to a PAD in this screen it cannot play a percussion sound. To complete this process just press the MEMORY & CONTROL menu button once more.**

**HINT!**

***It is useful to put those PANEL MEMORIES on the PADs which can otherwise only be reached through the BANK switches 2 + 3 - PANEL MEMORIES such as BANK 2 -PM 5 or BANK 3 - PM 8. This way you by-pass the BANK button and switch over directly.***

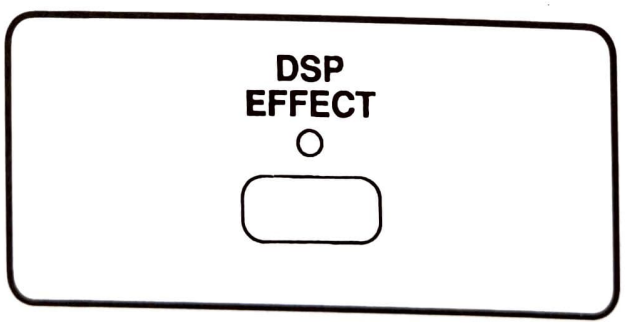
## 2.8.0 DSP (Digital Signal Processor)

In addition to REVERB and DIGITAL EFFECT you will find that the KN2000 has an additional, totally new effect called DSP. The DSP is able to produce 8 different programmable digital effects.

The following effects are available:

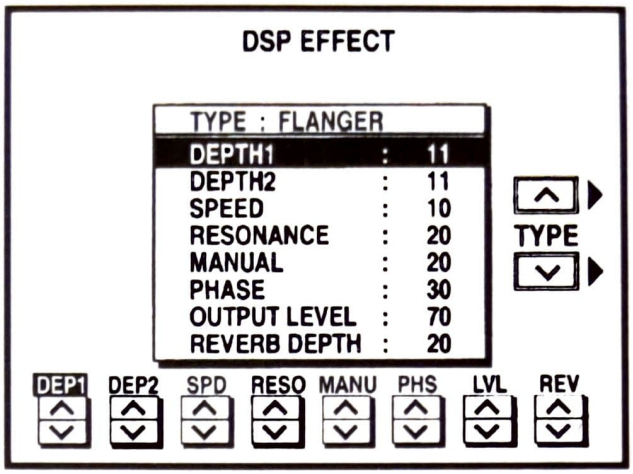
| | |
|---|---|
| **CHORUS** | **DISTORTION** |
| **OVERDRIVE** | **EXCITER** |
| **DELAY** | **STEREO DELAY** |
| **FLANGER** | **PHASER** |

The DSP effect is different from the DIGITAL EFFECT (which is already assigned to each sound) in that it is not related to a SOUND. That is to say if you add a DSP Chorus to an Electric Piano, and then switch to Trumpet, the DSP effect will remain the same.




## 2.8.1 Calling up individual Effects

The DSP EFFECT button allows you to switch the DSP effect ON and OFF. If you press and hold the DSP button for a few seconds the current effect appears on the display with all its available parameters.




This process is an EASY SETTING function, which is why the DSP indication disappears again after a few seconds. To keep the DSP indication in the display, use the DISPLAY HOLD button (on the right-hand side of the display).

On the right edge of the display you will now see two up/down switches labelled TYPE. Here is where you set the desired type of effect. Get to know them by calling up all effects and playing them with any sound.

## 2.8.2 Examples of use

You may wonder which type of effect to use with which sound. Here are some suggestions:

| | |
|---|---|
| **CHORUS** | *Electric Pianos / Solid Guitars / Synth Sounds / Synth Pads* |
| **DISTORTION** | *Distortion or Overdrive Guitar* |
| **OVERDRIVE** | *Distortion or Overdrive Guitar / Rock Organ* |
| **EXCITER** | *Trumpet / Nylon String Guitar 1 & 2 / Jazz & Alto Flute* |
| **DELAY** | *Solid Guitars / Synth Lead Sounds* |
| **STEREO DELAY** | *Solid Guitars / Synth Lead Sounds* |
| **FLANGER** | *Solid Guitars / Electric Pianos / Jazz & Rock Organs / Synth Pads* |
| **PHASER** | *Solid Guitars / Electric Pianos / Synth Pads* |

Of course any decision on how to use the effects depends entirely on your taste and creativity.

## 2.8.3 Adjustment

Each type of effect has been preset. But that does not necessarily mean that you will like these settings, so you might want to adjust the effect chosen to your own taste.

Let's take the DELAY effect which might also be described as an echo effect. Press and hold the DSP button for a few seconds and press DISPLAY HOLD. Then choose the 'DELAY' effect. You will find below the effect name the parameters DELAY and FEEDBACK. To adjust the parameters use the buttons under the display. Adjust the speed of the echo with the DELAY switch and the length of the echo with FEEDBACK - that's how easy it is. (The DELAY parameter is expressed in milliseconds, so the higher the number the longer the gap between each repeat).

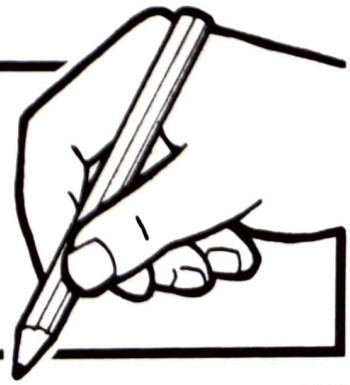
The settings OUTPUT LEVEL and REVERB DEPTH you will find with all effects. Here again volume and reverb may be adjusted. As these two functions are the same everywhere I have omitted them on the following list of possible settings.

## 2.8.4 Parameters and results of Effects

| | |
|---|---|
| **CHORUS** | *Adds body to the sound and a warm detuning effect.* |
| *DEPTH* | *Intensity of modulation (movement)* |
| *SPEED* | *Speed of modulation (movement)* |
| **DISTORTION** | *The Sound is distorted as when the volume of an amplifier is turned up too high* |
| *DEPTH* | *The overall amount of distortion (how distorted the sound is)* |
| *DRIVE* | *The level of the sound fed through the distortion* |
| **OVERDRIVE** | *A somewhat more natural distortion, like a valve amplifier* |
| *DEPTH* | *The overall amount of distortion (how distorted the sound is)* |
| *DRIVE* | *The level of the sound fed through the distortion.* |

| | |
|---|---|
| **EXCITER** | *Boosts the treble frequencies of the sound, sometimes with a slight distortion* |
| *DEPTH* | *The overall amount of the effect* |
| *DRIVE* | *The level of the sound fed through the effect.* |
| *BOOST LEVEL* | *Amount of treble boost* |
| **DELAY** | *An echo effect.* |
| *DELAY* | *Speed of echo effect (shown in milliseconds: the higher the number the longer the gap between each repeat.* |
| *FEEDBACK* | *The duration of the echo (the number of repeats)* |
| **STEREO DELAY** | *An echo effect divided between the left and the right speaker* |
| *DELAY R1+2* | *Echo speed, right speaker* |
| *DELAY L1+2* | *Echo speed, left speaker (two echos are provided, one each for left and right channels)* |
| *FEEDBACK R* | *Echo duration, right speaker* |
| *FEEDBACK L* | *Echo duration, left speaker* |
| **FLANGER** | *A wide sweeping modulation effect caused when two identical signals are added together slightly out of phase.* |
| *DEPTH 1+2* | *Intensity of modulation* |
| *SPEED* | *Speed of modulation* |
| *RESONANCE* | *Intensity of feedback* |
| *MANUAL* | *Raises the middle frequencies* |
| *PHASE* | *Intensity of right/left division* |
| **PHASER** | *Similar to FLANGER but less exaggerated* |
| *DEPTH* | *Intensity of modulation* |
| *SPEED* | *Speed of modulation* |
| *RESONANCE* | *Intensity of feedback* |
| *MANUAL* | *Raises the middle frequencies* |

*If you want to use several DSP effects with different settings during one piece of music it is advisable to store the settings in the PANEL MEMORY -PANEL MEMORY also stores DSP settings!*



# Rhythm and Auto Play Chord


| | | |
|---|---|---|
| **3.0** | Rhythms and Accompaniment in general ..... | **25** |
| **3.1** | ONE FINGER ..... | **26** |
| **3.2** | FINGERED ..... | **27** |
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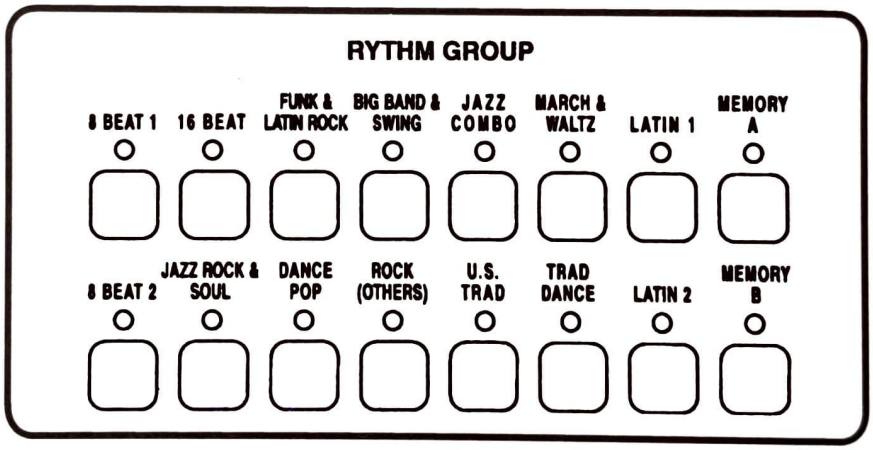
# 3.0 Rhythms and Accompaniment in general

The Technics KN2000 is capable of being used in many different ways, including, if required, as a complex and comprehensive workstation. However, it's accompaniment system makes it an immediate instrument to play and importantly enables you to get a good musical result quickly. An accompaniment pattern on the KN2000 is comprised of five parts: Drums, Bass and three Accompaniment Parts.

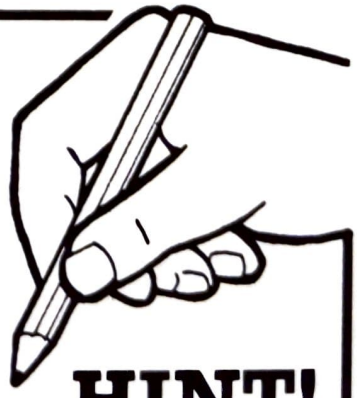
To choose from the KN2000's 200 accompaniment patterns use the same procedure as choosing a sound. Here, as with sounds the 200 preset patterns have been divided into RHYTHM GROUPS. Every group has a descriptive title such as 'MARCH & WALTZ' or 'BIG BAND & SWING'.

The RHYTHM GROUPS are different from the SOUND GROUPS in that they do not contain the same number of patterns each -the number of patterns varies from group to group. After pressing a RHYTHM GROUP button you will always find 9 different patterns on the first selection page on the display.



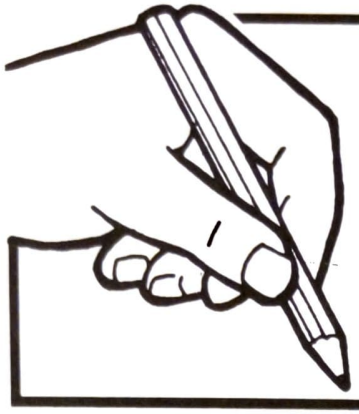

As with choosing sounds press >MORE RHYTHMS< on the lower right-hand side of the screen to get to the other rhythms on the next page. >RETURN< takes you back to the original page.

***In the chapter 'SOUNDS IN GENERAL' I mentioned that on the first selection page you always find the most useful sounds. This cannot be said for the rhythm groups as one could not give priority (for example) to the different BOSSA NOVAS under LATIN2. Your taste and your needs are decisive here, and it is always advisable to check out the patterns on the second selection page!***



**HINT!**

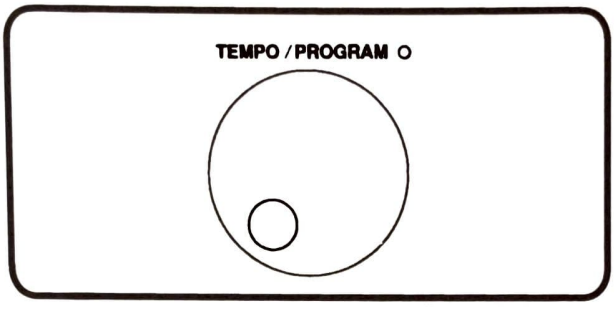
Each of the 200 patterns has a VARIATION, which you can select easily by pressing the VARIATION button next to the FILL-IN 1 button.



## HINT!

***Use VARIATION for the Chorus of a song and for the Verse switch back to the basic pattern by pressing the VARIATION button again.***

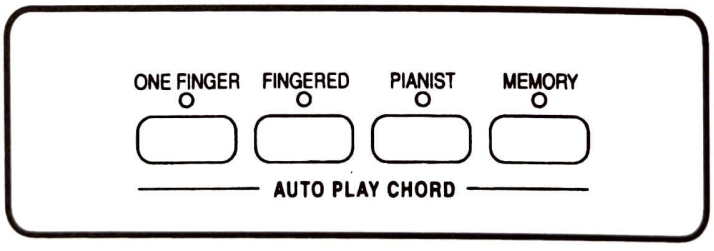
The tempo can be set with the big TEMPO/PROGRAM wheel.




The following chapters deal with the various ways of using Auto Play Chord.

# 3.1 ONE FINGER

ONE FINGER is the first of three ways to control the accompaniment with the left hand. It is also the most simple. First press the ONE FINGER button.




The keyboard is now automatically divided into two halves. The split point is indicated by an LED light next to the keyboard. (see: **1.5 Split Point**) ONE FINGER mode will be useful to you if you are unfamiliar with forming left hand chords.

Select SYNCHRO & BREAK next to the START/STOP button and press a key to the left of the keyboard split. The Rhythm will start automatically and you will hear a pattern playing around a Major chord in the currently selected Rhythm Style. If you release the key the Rhythm will stop playing (this is

what is meant by 'BREAK' in SYNCHRO & BREAK). If you turn on MEMORY in the Auto Play Chord section the pattern will keep playing when you release the key.

Not only major chords, but minor, seventh and minor seventh chords can be created in ONE FINGER mode by holding down additional white or black keys to the left of the key note that you are playing as follows;

Key Note + any black note = minor
Key Note + any white note = seventh
Key Note + any black & white note* = minor seventh
*(within five notes of the chord key)

The chords played are displayed in the screen as chord symbols.

## 3.2 FINGERED

This mode of control is much more versatile than ONE FINGER, allowing you to play full chords yourself, around which the KN2000 will play it's accompaniment pattern. Your chord can be of three or four notes and the following 19 chord types are recognised in FINGERED mode (examples shown in the key of C in root position):

| Chord Display | Notes Played |
|---|---|
| C | C, E, G |
| C7 | C, E, G, Bb |
| C Maj7 | C, E, G, B |
| C aug | C, E, G# |
| C aug7 | C, E, G#, Bb |
| C min | C, Eb, G |
| C min7 | C, Eb, G, Bb |
| C dim | C, Eb, Gb, A |
| Cm7 b5 | C, Eb, Gb, Bb |
| CmM7 | C, Eb, G, B |

| Chord Display | Notes Played |
|---|---|
| C sus4 | C, F, G |
| C7 sus4 | C, F, G, Bb |
| Cb5 | C, E, Gb |
| Cm b5 | C, Eb, Gb |
| C6* | C, E, G, A |
| Cm6* | C, Eb, G, A |
| CM7 b5 | C, E, Gb, B |
| CM7 #5 | C, E, G#, B |
| CmM7 b5 | C, Eb, Gb, B |

*must be played in root position

# 3.3 PIANIST

In spite of its name, PIANIST mode is not only for Piano players but is an original Technics feature which allows you to control accompaniment with more freedom in your performance. PIANIST mode enables you to control the accompaniment over the entire keyboard, without a split point. You can play with one or two sounds of your choice over the whole range of the keyboard and the KN2000 analyses all of the notes that you play to establish the harmony. If you play only one or two notes the KN2000 will ignore them allowing you to play melodic lines without confusing the chord recognition.

In PIANIST mode the KN2000 computer is running at full steam to calculate the necessary chords in fragments of a second, making it feel as though you are playing with a live band.

In addition to the 19 different chord types of FINGERED, PIANIST mode offers 7 more including several jazz voicings:

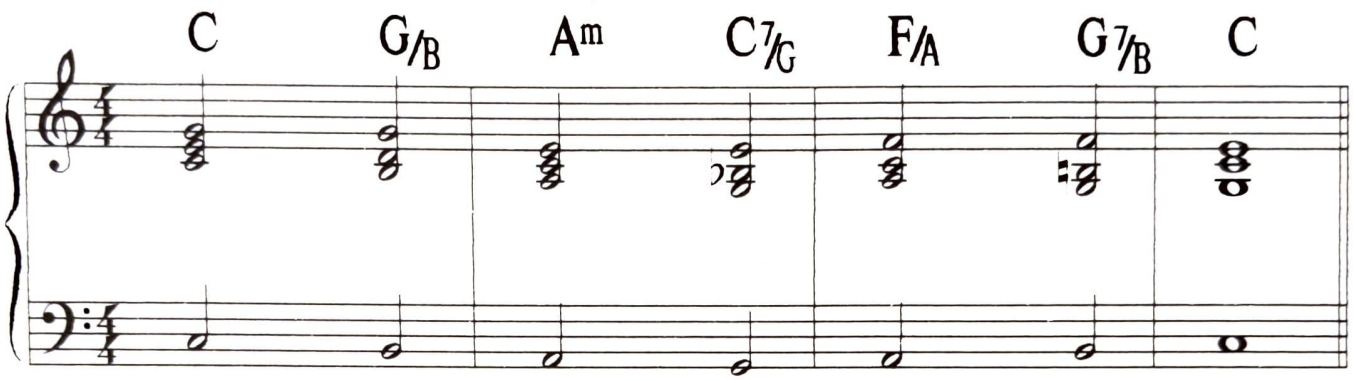
| | |
|---|---|
| **C69** | **C79** |
| **Cm6 9** | **Cm7 9** |
| **C 7+9** | **C13** |
| **C 13-9** | |

Especially players with a taste for jazz will be delighted by this enlarged chord choice. The KN2000 doesn't always alter the backing pattern to the particular voicing, but it recognizes each of the types mentioned and creates a suitable backing harmony to go with it. Many of these additional chords are recognised in open voicings without the root note. For example, C 69 can be played as E, A, D, omitting the root and the fifth with the notes E, B and D# with your right hand the chord could be recognised as C7 #9 (E, Bb, D#) or as F#13 (as E, A#, D#) or as Dbm69 (as E, Bb, Eb). The keyboard of course doesn't know which result you want! So if you play a root note with your left hand the KN2000 will work out which chord it should be.

The KN2000 is also able in PIANIST Mode to play what we call an ***on bass*** chord. If for example you play a Gm7 chord in your right hand (ie: G, Bb, D, F) and hold a single C note with your left hand, the result will be the Gm7

accompaniment pattern with the bass pattern played just by the C note. This particular voicing would be normal for C11, however there are many other interesting results from this feature, as long as the left hand note is a fifth or more away from the lowest note in your right hand. For example:-

Take the '16 Bt Ballad 3' accompaniment (slow tempo) and play a C major chord with your right hand. Don't forget to start the Rhythm! To this C major chord you add a C in your left hand. Now take this left hand note chromatically downwards, and you will find that the bass in the accompaniment follows. Try the following with the same pattern, and notice the familiar descending bass line:-




In the previous modes (ONE FINGER and FINGERED) this would be impossible.

## HINT!

***When playing in the PIANIST mode use only those sounds which really apply for the whole range of the keyboard and which are suited to being played polyphonically with both hands (for example. Piano, Organ, Guitar...).***

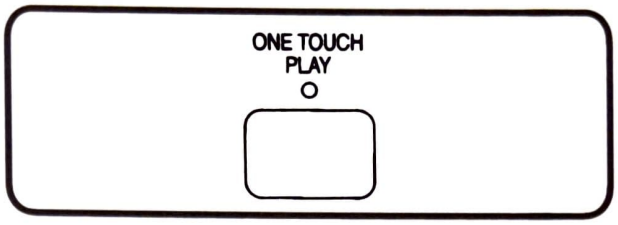
## 3.4.0 ONE TOUCH PLAY & MUSIC STYLE ARRANGER

ONE TOUCH PLAY and MUSIC STYLE ARRANGER are dealt with together here as they always go hand in hand in practical use.

The ONE TOUCH PLAY function has become a Technics classic. ONE TOUCH PLAY sets up the KN2000 for you with suitable sounds, balance and tempo for a particular Rhythm.

## 3.4.1 How to use: ONE TOUCH PLAY

You have chosen a Rhythm pattern and are now wondering what sound to use with it. Just press and hold the ONE TOUCH PLAY button for a few moments,




and on the display the ***style*** name of the chosen ONE TOUCH PLAY registration appears. Here, for example, '16 Bt Standard 1':

The KN2000 has now automatically switched to the APC mode 'FINGERED' and made a complete registration in which all the CONDUCTOR parts are set with suitable sounds. If a CONDUCTOR part is not switched on in the registration it will still have a suitable sound set, allowing you to change to another sound in the RIGHT part of the keyboard just by selecting (for example) RIGHT 2, or to add a left hand sound by turning on LEFT.

The individual volume settings for the different accompaniment tracks have also been adjusted to create a balanced overall sound. The tempo has also been preset, but just like all the other settings you can modify it according to your needs and store your new version in the PANEL MEMORY (see: **5.0 Panel Memory**)

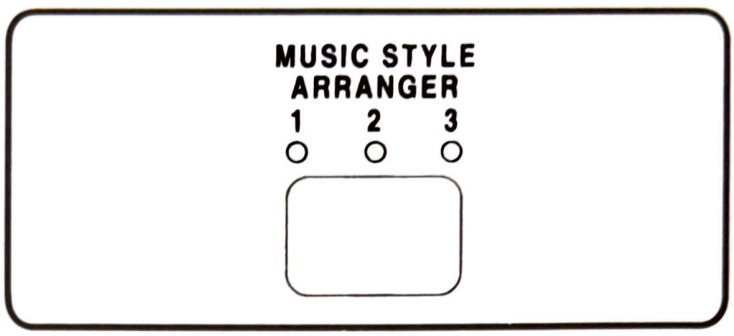
Where needed ONE TOUCH PLAY registrations also contain TECHNI CHORD and DSP settings.

## 3.4.2 MUSIC STYLE ARRANGER

With the MUSIC STYLE ARRANGER the KN2000 goes a step further than ONE TOUCH PLAY to offer you 3 different registrations for each accompaniment you choose.

## 3.4.3 What the MUSIC STYLE ARRANGER does

Select any accompaniment and then press the MUSIC STYLE ARRANGER button.




The KN2000 has now (just as with ONE TOUCH PLAY) set a suitable overall registration . When you press the MUSIC STYLE ARRANGER button twice more the keyboard goes on to two more stylistically suitable registrations. The order of settings is: 1-2-3-Off.

These three registrations follow the musical principle of enlarging the arrangement from MSA 1 to MSA 3. The backing in MSA 1 is generally just Bass, Drums and Accomp 1. Accomp 2 and 3 are added for MSA 2 and MSA 3 switches automatically to the VARIATION pattern.

You see now that not only the sound choice changes, but that the accompaniment pattern is also divided into three steps.

You will find another interesting way of moving from one MSA to the next by using the two FILL-IN buttons. If you press FILL-IN 2 while playing the MUSIC STYLE ARRANGER changes to the next higher step. When FILL-IN 1 is pressed it returns to the next lower step (which you can also see from the LED lights).

---

## *IMPORTANT !*

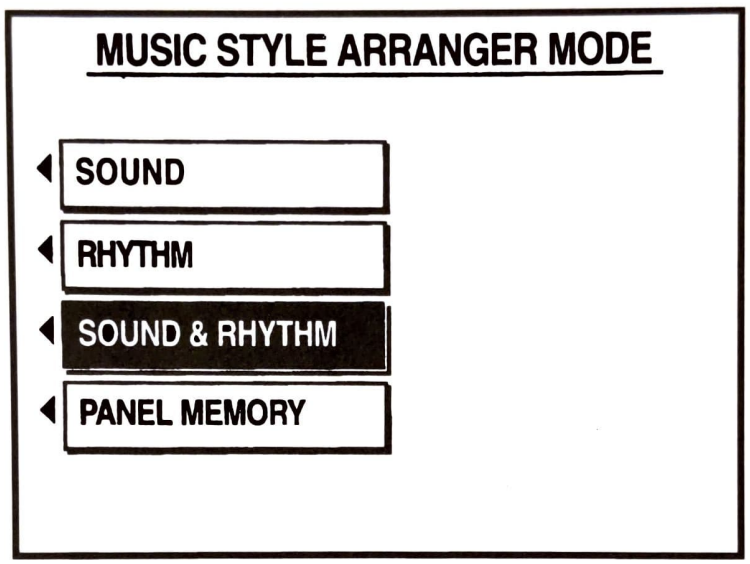
***The MUSIC STYLE ARRANGER automatically sets a suggested tempo for each Rhythm. If you change the tempo it will stay at your new speed while the Rhythm is running, even if you change to a different Rhythm. If you stop the Rhythm and re-select MUSIC STYLE ARRANGER the preset tempo for the selected Rhythm will be reinstated.***

---

## 3.4.4 MSA Modes of Operation

There are four modes available for the MUSIC STYLE ARRANGER which all help to make playing easier. Maybe the constant changes in backing are not to your taste, and you simply want to have the sound changed. Or you would like just the accompaniment to be divided into three steps without changing the sound.

To choose these modes the KN2000 has an EASY SETTING function. Press and hold the MUSIC STYLE ARRANGER button for a few moments.




The display has now turned to the selection page for MUSIC STYLE ARRANGER modes. To keep this page on display press the DISPLAY HOLD button (on the right-hand side of the display).

If you change to SOUND now the MUSIC STYLE ARRANGER will only change the sounds, the APC backing will stay at the MSA 2 level. You are free to turn on the VARIATION button, but it will be cancelled when you change to the next MSA.

If you choose RHYTHM only the backing will change and you are free to select any sound desired.

SOUND & RHYTHM is the default mode described previously.

With PANEL MEMORY you can make the MUSIC STYLE ARRANGER alter between three of your own settings in PANEL MEMORIES 1,2 & 3. This means you first have to set three of your own registrations for the first three PANEL MEMORIES. In the PANEL MEMORY mode the KN2000 now uses your first three PANEL MEMORIES instead of the preset settings.

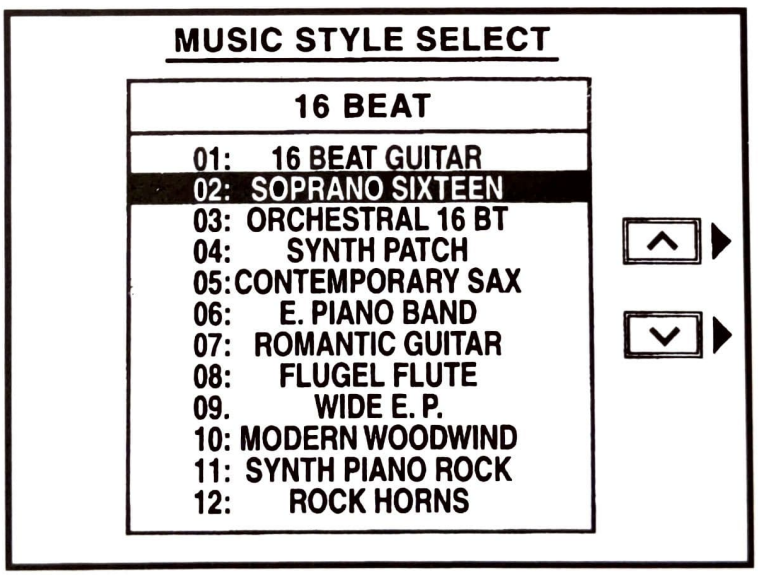
To avoid losing your MUSIC STYLE ARRANGER creations, you should save them on disk. (See: **9.2.0 Saving On Disk**)

Here is an overview of the three modes:

| | |
|---|---|
| **SOUND** | *Only the sounds are changed.* |
| **RHYTHM** | *Only the accompaniment is varied.* |
| **SOUND&RHYTHM** | *Sounds and accompaniment are varied* |
| **PANEL MEMORY** | *PANEL MEMORIES 1-2-3 are used for changes.* |

## 3.4.5 How to use: MUSIC STYLE SELECT

The MUSIC STYLE ARRANGER has three complete set-ups for each of the 200 Rhythm Patterns on the KN2000, so in total there are 600 different set-ups, which are called MUSIC STYLES. MUSIC STYLE SELECT allow you to access all of these MUSIC STYLES individually. A MUSIC STYLE has a name which is descriptive of it as a total style, you don't even need to know which Rhythm to select, just select a particular style and the KN2000 will set the entire keyboard up for you. To use MUSIC STYLE SELECT just press and release the ONE TOUCH PLAY button, and a list will appear in the screen.




Just scroll through the list using the UP/DOWN buttons or the TEMPO/PROGRAM wheel and when you stop on a particular name the KN2000 will set itself up for that style. Each Rhythm Group has it's own dedicated list, if you change to a different RHYTHM GROUP, a different list will appear. The display only shows 12 styles at one time and when you have reached the bottom of the list you can scroll further down, as the list goes on according to the size of the RHYTHM GROUP.

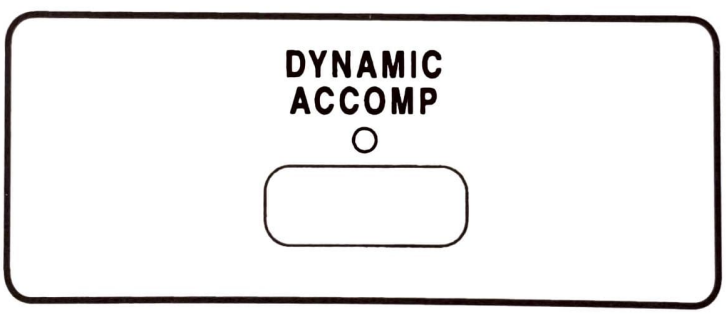
To leave the style list just press the ONE TOUCH PLAY button once more or press EXIT.

**HINT!**

***If you especially like one of the MUSIC STYLE SELECT registrations or want to alter it slightly to your own taste you can always save this setting in one of the PANEL MEMORIES and then save it on disk.***

## 3.5.0 DYNAMIC ACCOMP

The feature most often misinterpreted in the KN2000 & KN1000 is the DYNAMIC ACCOMP function. Often users complain: "My keyboard doesn't work properly -when I press DYNAMIC ACCOMP nothing happens!" At first glance this is correct: a substantial change in accompaniment cannot be created by only switching on DYNAMIC ACCOMP!




## 3.5.1 How does DYNAMIC ACCOMP work ?

First of all DYNAMIC ACCOMP has no effect unless the accompaniment is running. Start any accompaniment with all accompanying voices (Bass, Accomp 1, Accomp 2 and Accomp 3) activated. Now listen carefully to the accompaniment pattern you have chosen.

You will notice that each pattern consists of 4 or 8 bars and starts again after the fourth or after the eighth bar. This may become monotonous after a while, so to avoid this Technics invented DYNAMIC ACCOMP. It will make your accompaniment pattern seem live and will allow you to emphasize certain parts musically, whilst remaining easy to use.

## 3.5.2 How DYNAMIC ACCOMP is controlled

Now switch on DYNAMIC ACCOMP and start your accompaniment again. If you play a chord a little harder with your left hand the KN2000 will play a sort of gentle fill-in for one bar, known as a dynamic pattern. Usually this can be noticed clearly in the drums, but actually all of the parts might contribute to the pattern.

If you play some faster or higher velocity passages with your right hand the keyboard will also react with a dynamic pattern. The third way to introduce a dynamic pattern is by using the PITCH BEND wheel (on the left side of the keyboard).
You will realize that with certain playing techniques you can control DYNAMIC ACCOMP as though it were your backing band. Here are the three techniques at a glance:

1. **Pressing the keys harder (left or right of split)**
2. **Playing more quickly**
3. **PITCH BEND wheel use**

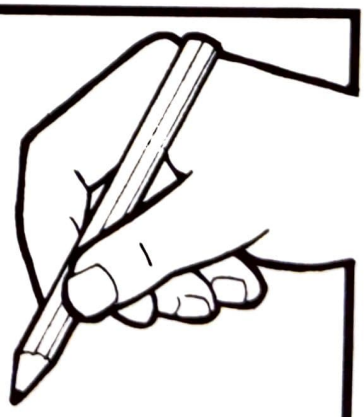
For each accompaniment 4 different dynamic patterns are called up, 2 for the basic pattern and two for the VARIATION.

The dynamic patterns vary in intensity from pattern to pattern. In a slow waltz they have naturally been arranged more softly than in a hard rock accompaniment.

DYNAMIC ACCOMP is a very musical addition to the normal FILL-INs and can offer a much smoother variation in backing for slower tempos.

**HINT!**

***The easiest way to activate DYNAMIC ACCOMP at will is by pressing the keys harder with the left hand.***



# The COMPOSER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# 4.0 THE COMPOSER

The COMPOSER is one of the most misunderstood features on the KN2000. It is often only employed in the use of commercial software. Whilst being able to add more professionally programmed patterns to your KN2000 is of course a great benefit, many people believe that working with the COMPOSER to create your own accompaniment patterns, is too difficult and demands special musical talents.

The KN2000 and the following assistance will (I hope) clear up this misconception!

---

***IMPORTANT!***

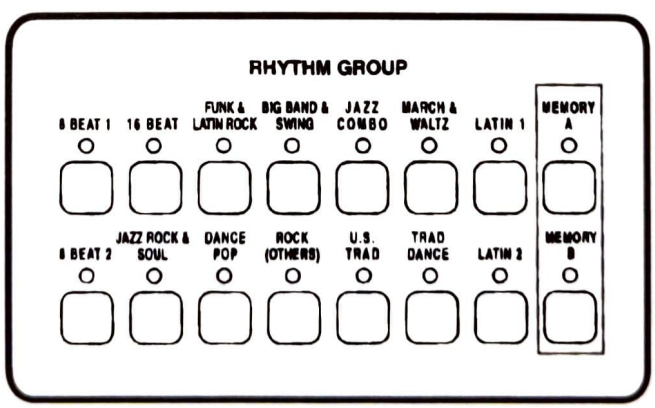
***The easiest way to start programming the COMPOSER is to use it to edit one of the preset Accompaniment Patterns. Starting in this way is much more comforting that being confronted by the empty void of a blank COMPOSER memory!***

---

## 4.1 COMPOSER MEMORIES

If the KN2000 has just been initialized you will find some factory preset settings in the COMPOSER memories. These are actually just preset patterns for which new sounds have been set. Thus it is impossible to start on the KN2000 with empty COMPOSERs - except if you have already deleted them.

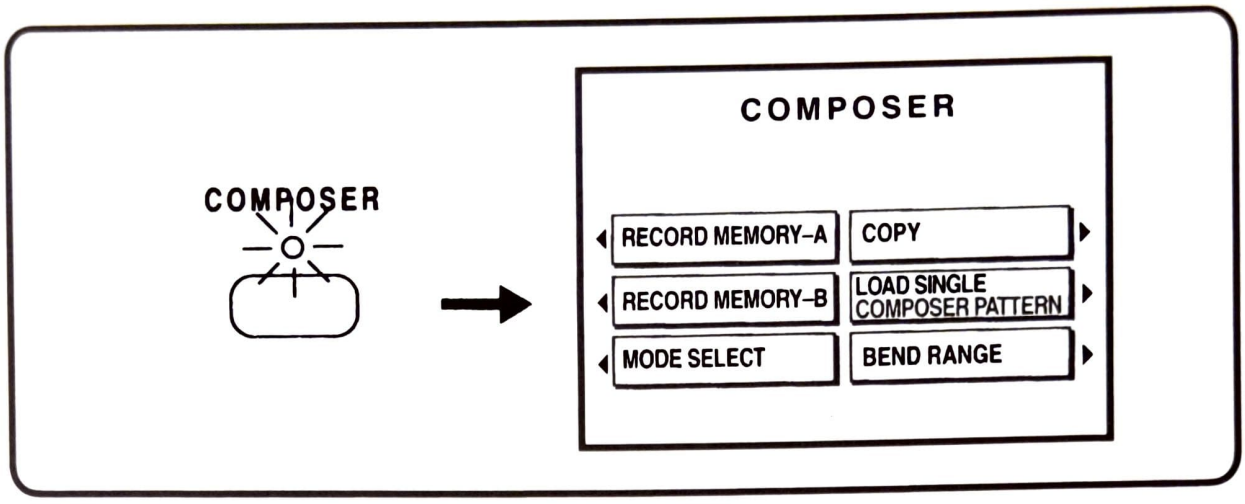
The COMPOSER memories are divided up into two groups: MEMORY A and MEMORY B.



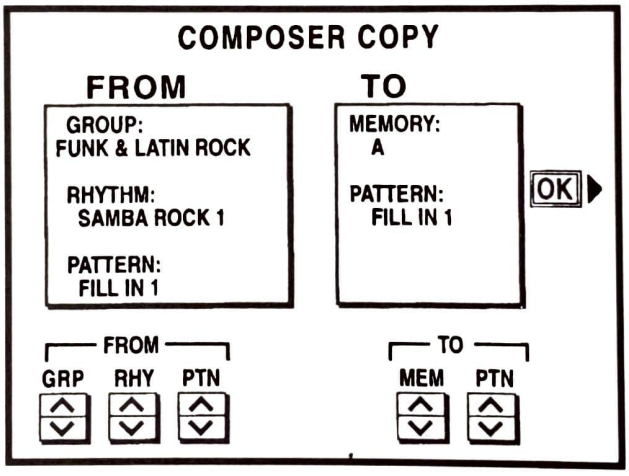

If you press one of these memory buttons the display will show you 6 available COMPOSER memories for each group. Unlike the RHYTHM GROUP display the COMPOSER display will not automatically revert to the main screen, so to return to the main screen you have to press EXIT. Calling up individual COMPOSER memories works just like the usual pattern selection.

# 4.2 Copying

First activate the COMPOSER menu by pressing the COMPOSER button under the MEMORY A and MEMORY B buttons.




Now the display shows you the COMPOSER main menu with it's various options. As we want to start by copying a preset pattern into the COMPOSER, press 'COPY' on the display. Now the COMPOSER COPY page appears in which you can make all settings for copying.




This page should be easy to understand, as it displays the copying process graphically and clearly. The display shows you a FROM box and a TO box allowing you to select from which pattern you want to copy and into which COMPOSER memory .

### Which preset pattern do you want to copy ?

In the FROM box select the preset pattern which is to be copied into the COMPOSER. To keep this exercise simple, choose a simple pattern like '8Bt Soul 1' from the '8 BEAT 2' GROUP. To do this you could use the buttons labelled GRP-RHY-PTN on the lower edge of the display, but it is much easier to choose your pattern directly on the keyboard. Simply press the RHYTHM GROUP button '8 BEAT 2' and then select the pattern (8 Bt Soul 1)

on the display as usual. After a few moments the KN2000 will automatically return to the COMPOSER COPY page and your selected pattern will have been entered in the FROM box.

**Into which memory do you want to Copy it?**

Now you just have to set the COMPOSER memory into which you want to copy. This is entered in the TO box. You only have to make two settings: which COMPOSER GROUP (MEMORY A or B) and which pattern (MEMORY 1-6/7-12). These settings must be made with the two MEM/PTN switches on the lower edge of the display. But on your display 'MEMORY: A PATTERN MEMORY 1' should already be set, so you can leave this setting. You are now copying into the first COMPOSER memory of group A. For future use you have to remember that copying into a COMPOSER memory will erase whatever is in the memory.

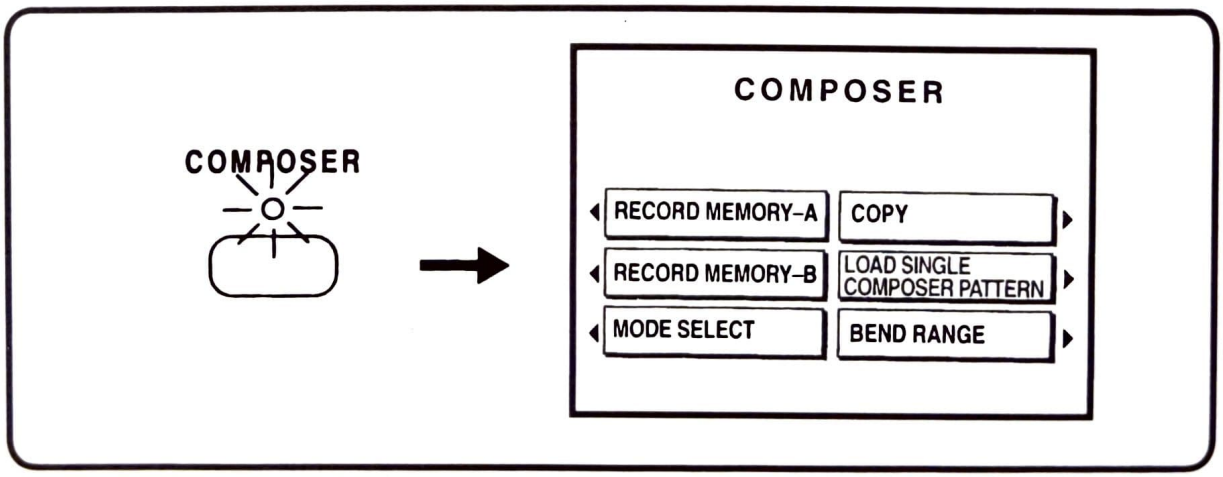
To complete the copying process you just have to press the OK button on the right side of the display. The display will confirm that the process is complete. To check if the copy is successful, leave the COMPOSER program by pressing the COMPOSER button again and then press the MEMORY A button. Now, on the COMPOSER display, '8 Bt Soul 1' should appear under M1.

## 4.3.0 Altering a preset pattern in the COMPOSER

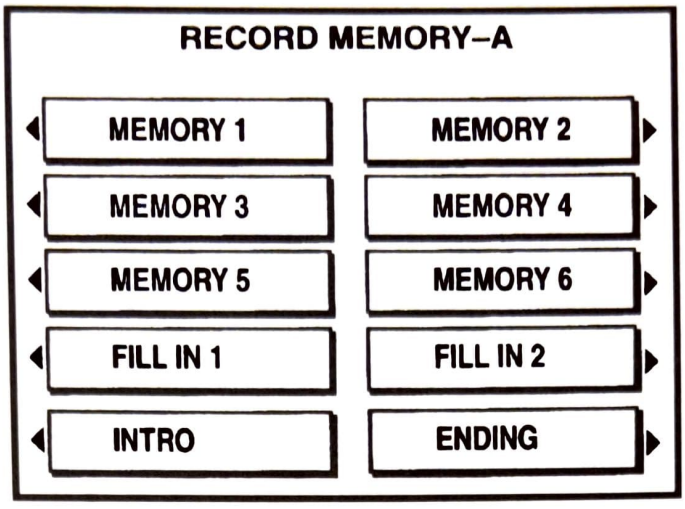
Now you can change the pattern you have just copied in the COMPOSER. Often just changing the sounds of a preset pattern can give the effect of a completely new pattern.

**Preparation**

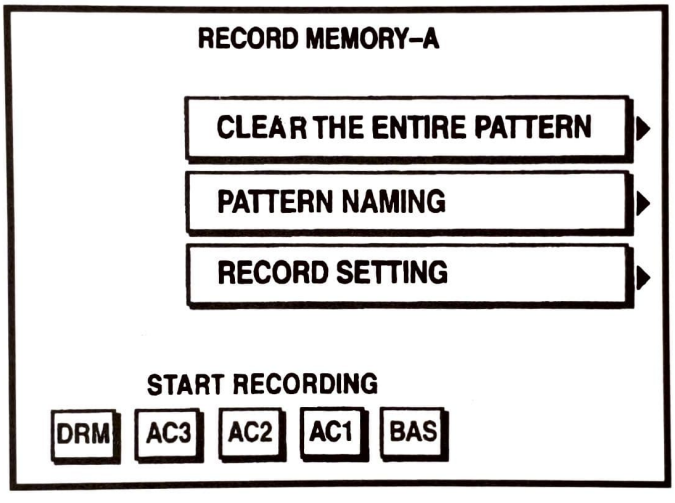
First press the COMPOSER button beneath the RHYTHM GROUPS again to get into the COMPOSER main menu.



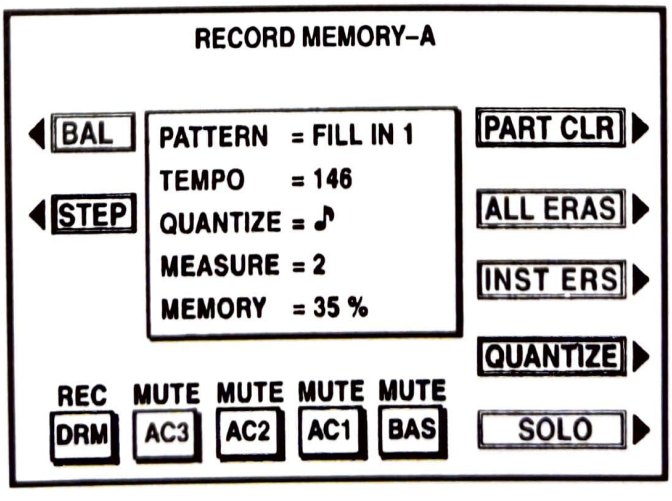
As the pattern you have just copied is in group A, press RECORD MEMORY-A.




On this page all the COMPOSER memories of group A are displayed. Your copied '8 Bt Soul 1' is in MEMORY 1. Therefore, press the MEMORY 1 button now.




From now on, please do not touch the keys, as the notes played might be recorded. At the bottom of the screen there are five buttons marked START RECORDING, one for each Composer part (Drums, Accomp3, Accomp 2, Accomp1 and Bass). Press one of these now and the pattern will start playing. At the same time the display will turn to the COMPOSER RECORD page.



## 4.3.1 Display and Functions

The COMPOSER RECORD page is a sort of 'workbench' on which your copied pattern lies waiting to be altered. It offers you the necessary information and functions to change your pattern.

In the box in the centre you see the display for the pattern just chosen (PATTERN = MEMORY 1), the TEMPO, the quantization value (QUANTIZE = OFF), the recording bar you are in at the moment (Eg: MEASURE = 1) and the remaining storage capacity of the COMPOSER (Eg: MEMORY = 66%). (The percentage of the total COMPOSER memory that is left).

You can start or stop recording with the START / STOP button.

## 4.3.2 Composer Parts

A COMPOSER pattern (or a preset pattern) is comprised of 5 parts as follows:-

| | |
|---|---|
| **DRM** | *for the drum part* |
| **BAS** | *for the bass part* |
| **AC1** | *for the first accompanying part* |
| **AC2** | *for the second accompanying part* |
| **AC3** | *for the third accompanying part* |

## 4.3.3 The Solo Function

If you just want to listen to the part on which you are working press SOLO on the right-hand edge of the display. Now MUTE appears above the parts which are not in use, and the part you are using is heard 'solo'. When the SOLO function is activated you can still switch to one of the other parts, which will then become the SOLO part. To hear all tracks simultaneously again, press SOLO once more (to turn it off).

Now call up track AC1. With '8 Bt Soul 1' this track plays a piano sound which can now be heard in eighth-notes. To make this more clear you might press the SOLO button. (If nothing is happening, press the START button!)

## 4.3.4 Choosing Sounds

Now it's really easy to change the piano sound into another sound. It works just like choosing a sound to play: just press any SOUND GROUP button and choose the new sound for the AC1 track there.
Which sound you choose is up to you: it could be the TELEPHONE sound! (total nonsense of course) Try a sound such as Mellow Solid Guitar.
The DRUM sounds from KEYBOARD PERCUSSION are not available for the accompanying tracks - they can naturally only be used for the DRUM track.

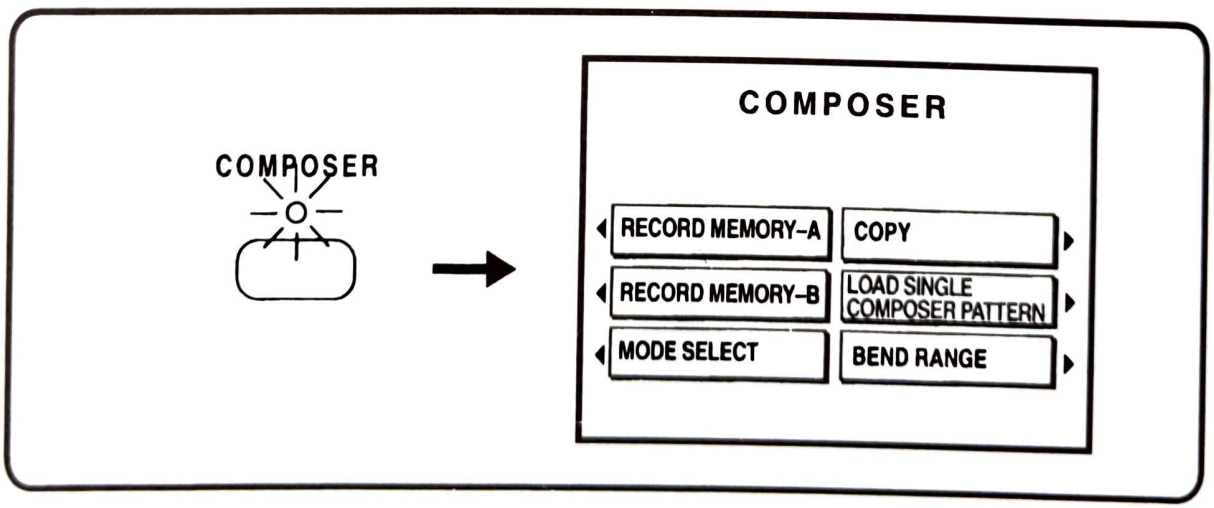
When you have activated the DRM track you can now choose one of the 16 available drum kits after pressing the SOUND GROUP 'KEYBOARD PERC' (already lit). The COMPOSER will be using the drum kit that was used in the preset pattern that you copied, so try changing it to another kit.

You should try out all parts and change sounds around a bit. It's fun, it's really easy, and it can change the character of a pattern substantially.

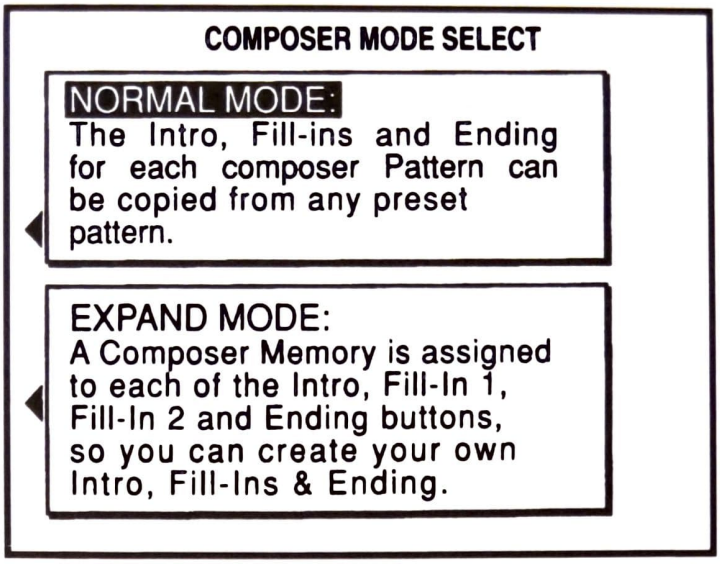
To end your session with the COMPOSER just press the COMPOSER menu button once more. The changes you have made have now been stored in the corresponding COMPOSER memory.

## 4.4 MODES (Normal / Expand)

To work with the COMPOSER the KN2000 offers you two different modes: NORMAL mode and EXPAND mode. To set these you should first return to the COMPOSER main menu.




Here you press MODE SELECT, and the display will let you choose between the two modes.


COMPOSER MODE SELECT
NORMAL MODE:
The Intro, Fill-ins and Ending for each composer Pattern can be copied from any preset pattern.
EXPAND MODE:
A Composer Memory is assigned to each of the Intro, Fill-In 1, Fill-In 2 and Ending buttons, so you can create your own Intro, Fill-Ins & Ending.

In NORMAL MODE each Composer pattern has it's own INTRO, FILL-INS and ENDING, copied from one of the preset patterns. If you copy a preset pattern as in the previous example the INTRO, FILL-INS and ENDING of the preset pattern are also copied into the COMPOSER.

So if you use the INTRO, FILL-IN or ENDING buttons the result will be the same as the preset that you copied. (Although if you change the sounds of a pattern the sounds will of course change for the INTRO, FILL-INS and ENDING). You can choose the INTRO, FILL-INS and ENDING from any preset pattern to go with your new or edited pattern, as detailed later in this chapter.

EXPAND MODE allows you to create your own INTRO, FILL-INS and ENDING in the COMPOSER memories provided, so that when you press FILL-IN 1 (for example) the pattern in the FILL-IN 1 COMPOSER memory is played for it's entire duration.

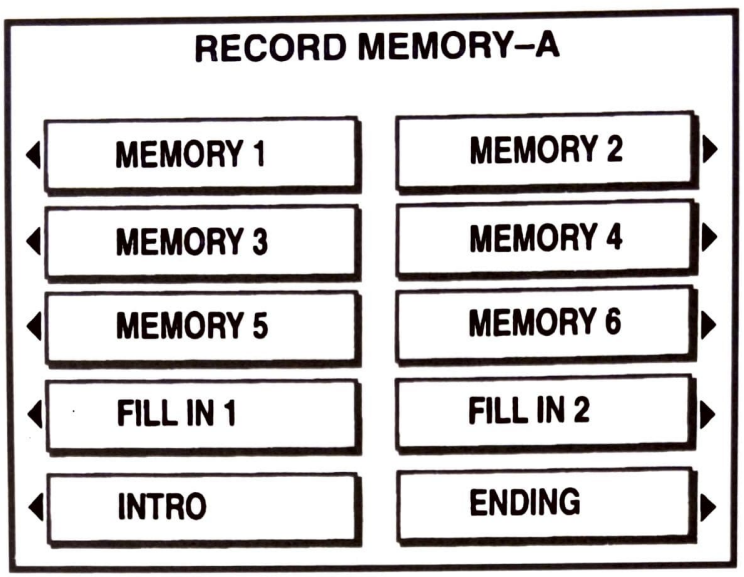
**Technics**

**Music Disk Collection**

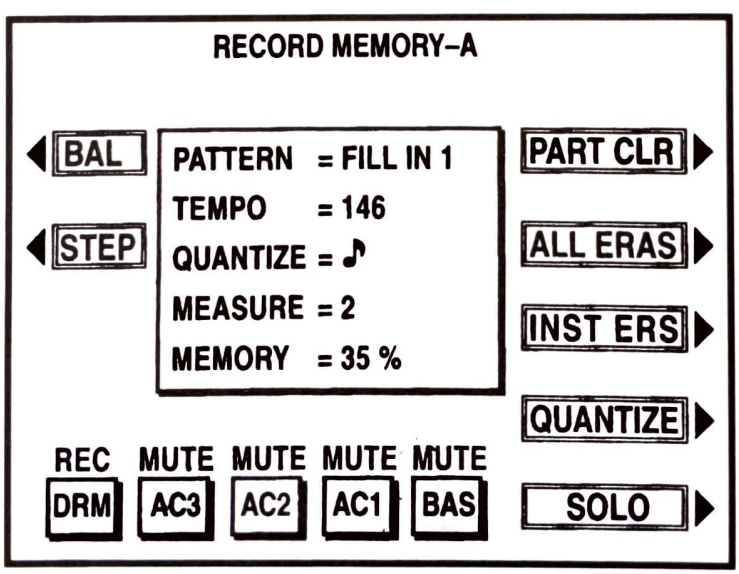
Patterns & Registrations software is programmed in EXPAND MODE providing complete new styles including new INTROS, FILL-INS and ENDINGS.

# 4.5 Recording Individual Parts

Having changed sounds in the COMPOSER, let's move on to replacing one of the COMPOSER parts. Do you still have the '8 Bt Soul 1' in COMPOSER MEMORY 1? If not, copy it again. Now select the RECORD MEMORY-A page again and then MEMORY 1.




Select a part on the lower edge of the display.




The COMPOSER will now play the pattern and has switched to the now familiar COMPOSER 'workbench' . While the pattern is playing, watch the MEASURE display (in the centre box). It will go to up to '4' and then return to '1'. This means that your pattern is four bars long. So, when you start recording, the MEASURE display will always show you which of the 4 bars you are in at that moment.

## 4.6 Deleting a part

Now you have to decide whether you want to add something to a part or whether you want to record a totally new part. For this exercise it will be easier to just delete a part first and record something new afterwards. Parts are deleted with PART CLR. You will find the switch on the upper right-hand edge of the display. Choose the part that you want to delete with the part selection buttons on the lower edge of the display - PART CLR always deletes the track presently active.

Select the AC1 track and then press the PART CLR button. The part has now been deleted irrevocably! Stay on this part and if desired select another suitable sound for your part. You are now ready to record your new part.

When recording a Composer pattern you must play in the key of C major, otherwise when the pattern is finally played on the keyboard it will play in the wrong key. For example, if you record your pattern in F major, when you finally play the pattern it will sound in the key of F major when you hold a C chord. (it will sound a fourth up from any chord that you play). This is also true of minor patterns, if you play your pattern in C minor, when you finally use the pattern it will play in C minor when you play C major. If you want to record in a different key you first have to make the appropriate settings on the RECORD SETTING page as detailed later in this chapter (See: **4.17.6 Different Input Modes**).

## 4.7 Quantize

It is quite normal to find that there is a human feel to the new part that you record, especially compared to the other parts. You may of course want a human feel to your pattern and whilst this is good for some specific styles such as Jazz Ballads it can be unpleasant with some rhythmically rigid patterns. To avoid this the QUANTIZE feature corrects your timing for you.

### So what does Quantize do?

QUANTIZE allows you to set a note value (a timing value) which effectively divides each measure into steps. The number of steps is determined by the note value, so a sixteenth note QUANTIZE value will divide each measure into sixteen steps. When you play your pattern all of the notes you play are dragged automatically onto the nearest step, thus automatically correcting (or tidying up!) the timing of your pattern. As a useful rule of thumb:-

**Always set the QUANTIZE value to the smallest note length that you are going to play.**

The QUANTIZE value can be set to anything from quarter notes to thirty second note triplets, though the most useful will be sixteenth notes and eighth note triplets. For the pattern in the example use sixteenth notes.

## 4.8 Recording a New Accompaniment Part

Now we come to the question of what you should record. The first accompaniment part usually has a basic rhythmic part, the other parts usually playing secondary lines (such as Obbligatos), like high-pitched strings or guitar figures. As you have deleted the ACC 1 part from your copied pattern, you should replace it with a good basic pattern in context with the rhythm and providing a logical harmonic structure.

For instance:

Now start the COMPOSER with the START/STOP button and start recording from the first bar. (Let the pattern play and watch the 'MEASURE =' indication to see when the pattern is coming round to the first bar again. This will also let you get accustomed to the tempo and feel of the pattern before you actually play the notes). Keep in mind that your pattern is four bars long. If the pattern is running too quickly, turn down the speed with the TEMPO/PROGRAM wheel.

If the pattern you are going to play starts on the first beat of measure 1, you can start your input with SYNCRO. To do this, you first have to press the SYNCRO/BREAK button (to the left of START/STOP). Now the pattern will start when the keys are pressed. With this mode you should take care to learn the tempo by heart before starting!

## 4.9 Corrections

After you have recorded the new pattern you will hear it play back continuously (until you press the START/STOP button). Listen to your recording and if some mistakes have crept in during recording (which frequently happens to me, too!), the simplest thing to do is to clear the part (PART CLR) and start again.

## 4.10 Deleting some of a part.

If you can locate the mistake precisely, for example. in bar 4, it might be better to delete only this part of the track. To do this use the ALL ERASE function. The switch for this function is on the right-hand edge of the display below PART CLR. ALL ERASE allows you to erase specific sections of the part. If for example you want to erase all of the notes in measure 4, just run the pattern and when you get to measure 4 press and hold ALL ERASE. (Remember to release it at the end of measure 4!) with care you can erase specific notes, not just entire measures, and of course slowing the tempo will help you in being accurate.

For more interesting deleting and adjusting functions, look up the next chapter 'STEP RECORD'!

As the first accompanying track (AC1) has now been completed, you may want to proceed with more new accompanying tracks on tracks AC2 and AC3.

## 4.11 Recording a New Bass Pattern

To record a new Bass part, proceed as you have done before: first select the Bass part, then delete it with PART CLR (and maybe choose a new bass sound if desired). For the Bass part, all of the KN2000's sounds (except drums) may be used; but usually a conventional Bass sound is the best choice.

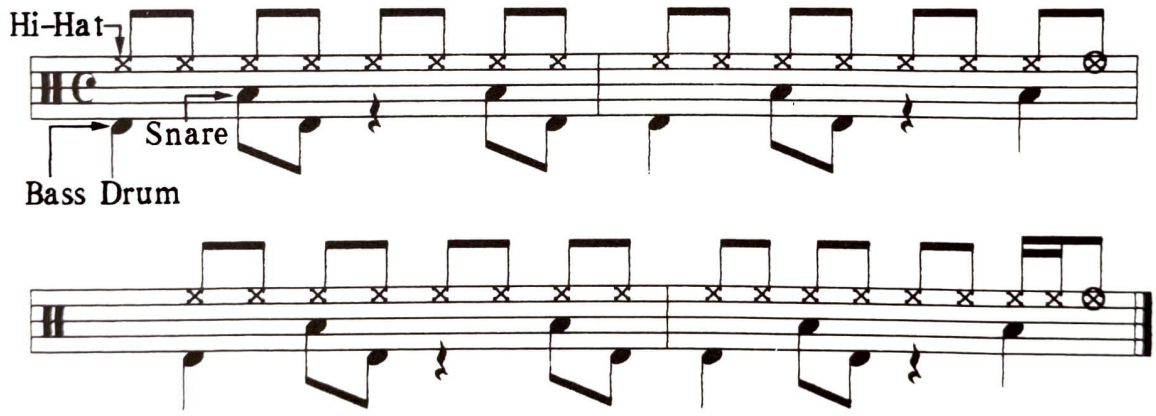
Make sure to set a sixteenth-note QUANTIZE, then start your recording in the first bar. Here are some easy examples:

## 4.12 Editing a Drum part

There are two ways to edit a drum part: first the more difficult way, in which you start as usual by deleting the whole part with PART CLR and then start out on a completely new pattern. The other way is much easier: with this one, individual sounds are deleted from the existing drum pattern, allowing you to keep certain basic elements of the pattern, and replace only the Hi-Hat or Snare (for example).

After you have selected the drum part, the complete keyboard is set with drum sounds from the drum kit you have chosen. When trying out the different drum kits you will have noticed that with most of them only alter the basic kit in the first octave. Above the Hi-Hat (see the designations next to the keyboard) the Latin and Effect-sounds start. These are usually the same with every drum kit, and with the exception of special rhythms (such as Latin rhythms) they usually serve only to enrich the drum part. The actual basic rhythm is played in the first octave where you find the Bass Drum, Snare, Tom Toms, Hi-Hat and other Cymbals.

The drum part in the '8 Bt Soul 1'-pattern is played only on the Bass Drum, the Snare, and the Hi-Hat cymbals - a relatively simple pattern, written down here in drum notation.



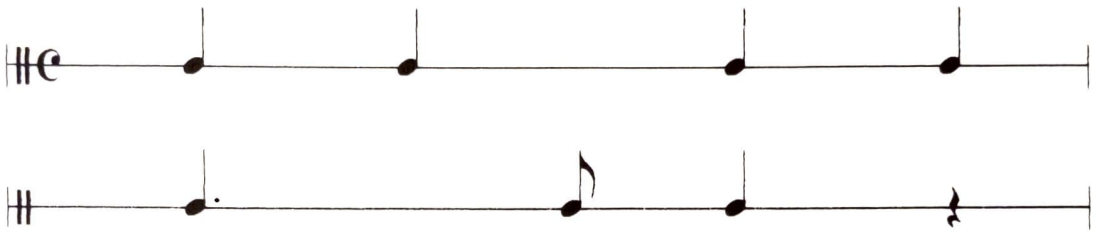

## 4.13 Deleting Individual DRUM Sounds

When the drum part is activated, a switch labelled INST ERS ('instrument erase') will appear on the right-hand edge of the display. With this function individual drum sounds can be deleted from the drum part. This deleting process works in the same way as the ALL ERASE function, only the key for the drum sound which you want to delete has to be pressed simultaneously.

For example to delete the Bass Drum completely from the part, start the pattern and press and hold the INST ERS button and the key for the Bass Drum (C1) together for the duration of the pattern. You can also delete only a certain part (for example. the first bar) by keeping the two buttons pressed only for the section which you want to delete. Now delete the Bass Drum pattern completely from the drum part. This leaves you with the Snare and the Hi-Hat.

## 4.14 New DRUM Patterns

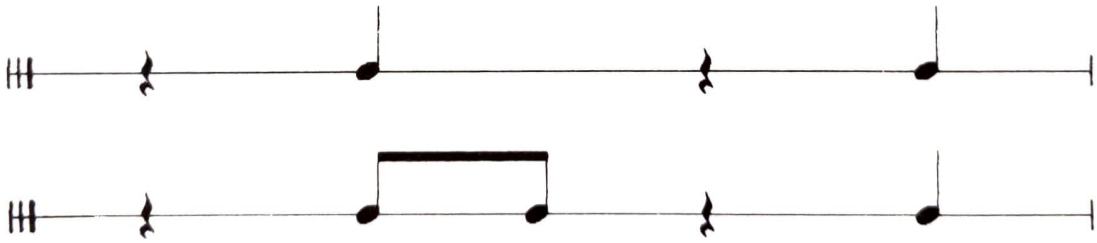
Now record a new Bass Drum pattern. Again, make sure to set sixteenth-note QUANTIZE - the right quantization is especially important for the drum track. As you can see in the following examples, the Bass Drum pattern can be played very easily and still produce a satisfying result.



If you should make a mistake while recording repeat the INST ERS procedure and try again.

When the recording of the Bass Drum has been successfully completed you may want to try the Snare. Again, delete the complete snare pattern (using INST ERS) and record a new pattern.

Again, here are some simple (and typical) examples:



Generally speaking, it might be said that in editing the COMPOSER tracks, it is quality, not quantity that will give you a good result. The simpler and straighter you keep your work, the more you will like your new pattern afterwards, as you will be able to see it in much more varied ways.

## 4.15 Balance

If the volume relation between the individual parts should not be to your taste, you can adjust it on the PART BALANCE page. To do this press the BAL (balance) button on the upper left-hand edge of the display . Here the volume settings for the individual parts are indicated, which you can now change with the balance controls on the lower edge of the display. With EXIT you return to the COMPOSER record page.

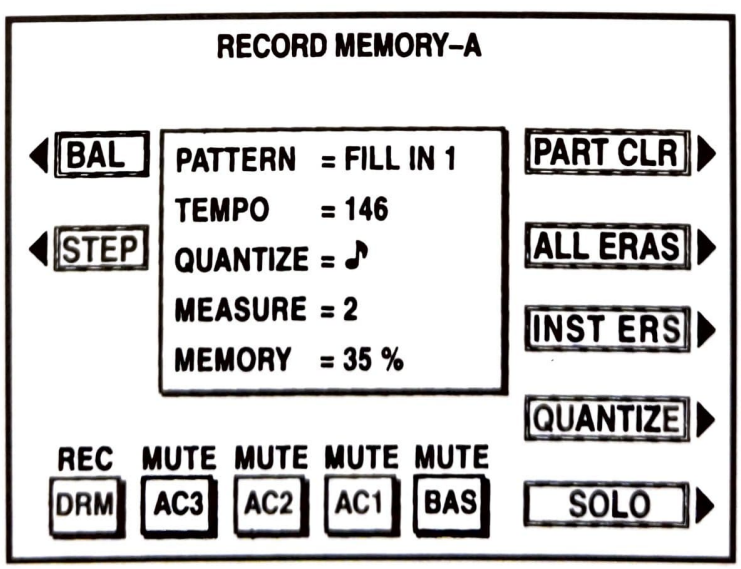
### HINT!

***To try out a part before actually recording it, select the PART BALANCE page. This change will keep the pattern running and you can play along with it without recording what you play!***

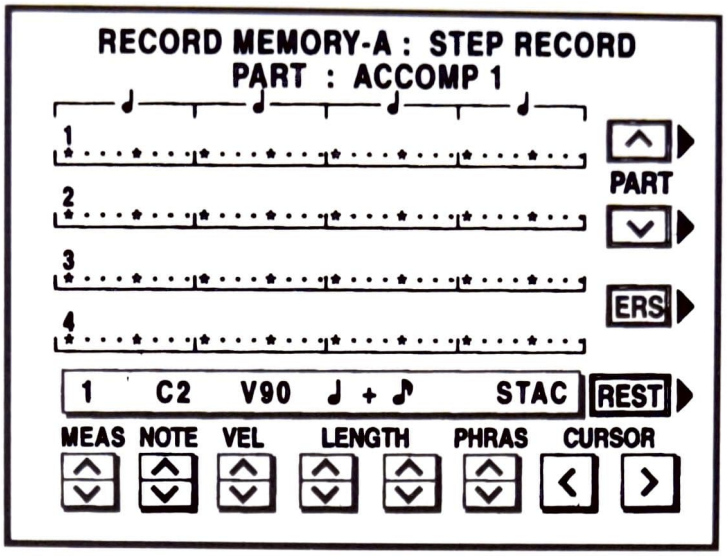
## 4.16.0 STEP RECORD (COMPOSER)

Until now we have recorded everything in the COMPOSER in realtime. However, just as with the KN1000, it is possible to enter notes step-by-step. This mode is useful for recording difficult parts which you find hard to play in realtime, or for using as an edit page to correct mistakes without having to delete the whole track.

To get to the Step Record page first turn to the COMPOSER RECORD page you already know.




On the left-hand edge of the display, below BAL, you will find the STEP button please press it now.




## 4.16.1 Display

You are now on the STEP RECORD page where you will find all the functions for a complete step-by-step input. STEP RECORD can be used either to input notes from scratch or as an event editor of the sort found on computer sequencer programmes. To get to know STEP RECORD it is again advisable to first copy a preset pattern into the composer.

With the two PART switches (upper right) select a part which you want to edit. The part chosen will then be shown in the display. To keep things simple, leave the drum part out for a start.

The CURSOR is the most frequently employed function on this page allowing you scroll through all the notes and events in the pattern with the present cursor position indicated by a white marker. The pattern has been divided into measures indicated by dotted lines. To get to another measure more quickly use the MEAS button on the lower edge of the display.

## 4.16.2 Measure lines

Each Measure line is divided into 32 dots and the little dividing lines after each group of eight dots indicate the position of the quarter-note beats and are only for your orientation. (You will notice the quarter notes bracketed at the top of the display). If you copied a pattern into the composer first you will see a series of asterisks which mark the location of one or more notes, or some other data such as pitch bend.

## 4.16.3 Cursor movements

If you arrive at such an asterisk with the cursor the note which is set there will be heard. If there are several notes the cursor will go through them one by one.

## 4.16.4 The INFO Box and Switches

The detail for each note (displayed as *) is shown in the box below as it is highlighted by the cursor. The information shown is comprised of the LENGTH, and the phrasing of the note, (PHRAS).

To enter a new note, move the cursor to the desired position, set the note length (for example an eighth note) and how the note should be phrased, and then physically play the note on the keyboard at the desired velocity. If you are using STEP RECORD as an edit page or you want to alter the note that you just entered only the pitch and velocity of the note can be changed, not it's length, phrasing or position.

## 4.16.5 Setting The Note Length

The length of the note has to be set in advance, as it cannot be changed afterwards. For this, two note length values are at your disposal. By adding two note values together you can achieve dotted notes, for example for a dotted quarter-note you will have to set a quarter-note plus an eighth-note-note. You can also set notes to a longer length than normally allowed for, for example to create an extreme legato effect with each note overlapping the next.

## 4.16.6 Setting the Right Phrasing

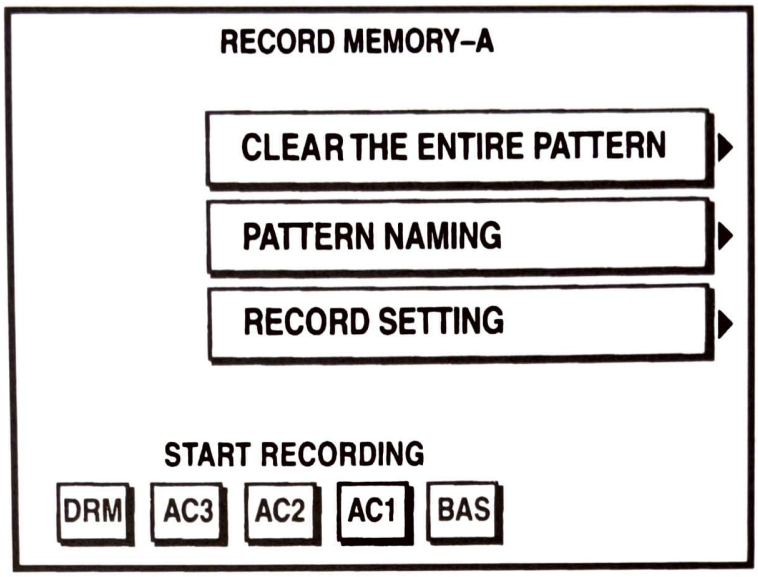
You can select from 4 different modes of phrasing with the PHRAS button: tenuto (TENU), normal (NORM), staccato (STAC) and very short (CUTT). Phrasing literally means the voiced part of the note, and it is important to consider this value in respect of the result you want to achieve (for example a legato string line might use TENU whereas a Mute Guitar figure might use STAC or CUTT) If you are unsure it is probably useful to set PHRAS to NORM.

## 4.16.7 Note Input

To set a note, move the cursor to the desired position, set the note length and phrasing, and then play the note on the keyboard. You can delete this setting again with ERS (erase) on the right-hand edge of the display. But as the cursor moves on depending on the note length you have set, you first have to return the cursor to the note to be deleted.

# 4.17.0 RECORD SETTING & PATTERN NAMING

There are many other setting possibilities for the COMPOSER, as for example the length of a pattern or simply setting a COMPOSER name. The switches for these functions you will find on the RECORD MEMORY-A/B page - you always have to go through the main COMPOSER menu to get to the COMPOSER RECORD page.

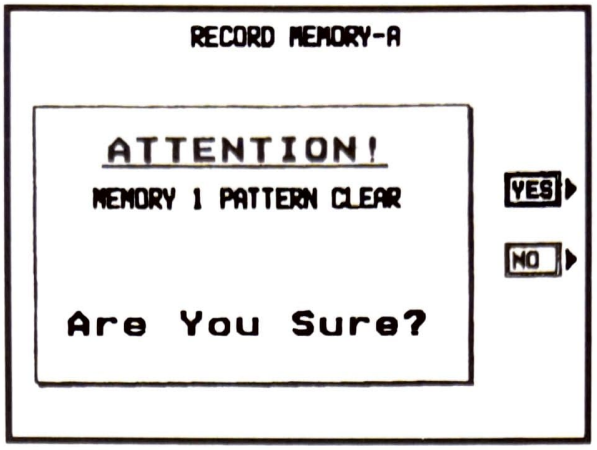



## 4.17.1 Deleting a COMPOSER Memory

Here you find three main switches. CLEAR THE ENTIRE PATTERN means just what it says; whatever pattern is in the selected COMPOSER memory will be deleted completely. So, if you want to delete a COMPOSER memory completely, push this button. A warning will appear on the display which will let you cancel this process with [NO] - with [YES] deletion is completed!

## 4.17.2 PATTERN NAMING - Preparation

PATTERN NAMING allows you to give a name of your choice to the COMPOSER memory which will then always appear on display during COMPOSER selection. Press PATTERN NAMING on the right-hand edge of the display, and a display with a writing field and a choice of letters, numbers and punctuation marks appears.




Before setting a new name, press CLR on the lower edge of the display to delete existing entries in the writing field. The field is now emptied and you can start naming.

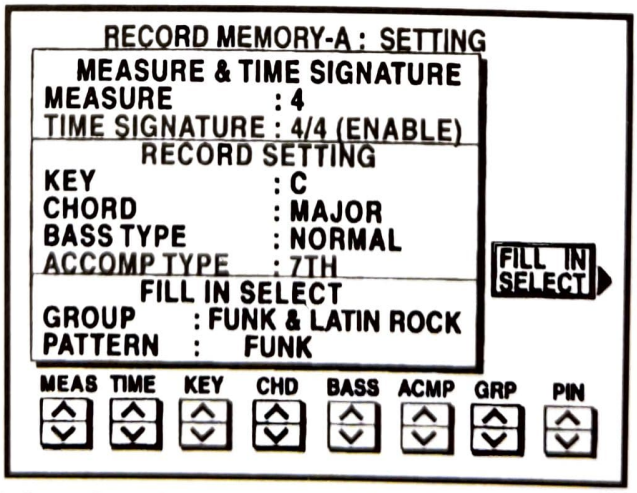
## 4.17.3 Inputting a New COMPOSER Name

Use the two POSITION buttons (<>) on the lower edge of the display to move the cursor within the writing field. With them you can move to the position where you want to set a letter. With the other two cursor buttons (ABC..](}) you can move the cursor within the alphabet/character menu. To do this, you can also use the TEMPO/PROGRAM wheel.

The A/a switch enables you to change directly from small letters to capitals and back. This function will save you some long trips with the cursor. After you have set a name, press EXIT to get to the preceeding page.

## 4.17.4 RECORD SETTING - Functions and Switches

RECORD SETTING calls up another page where some basic settings for the chosen COMPOSER memory can be made.




On the lower edge of the display you will find several switches for setting the various parameters in the box. The box is divided into three sections.

## 4.17.5 Length and Time Signature.

In the MEASURE & TIME SIGNATURE section the pattern length and the time signature are set.

**ATTENTION!**

**Settings in this section can only be adjusted when the COMPOSER is empty!**

This means that first you have to delete the COMPOSER memory with CLEAR THE ENTIRE PATTERN - so you have to decide on the length and form of the COMPOSER before recording.

Use the MEAS button to set the measure length of your new pattern. If you want the COMPOSER memory to be 4 measures long set MEAS to 4. The maximum length is eight measures.

Use the TIME button to set the time signature of your new pattern. If you want to create a Waltz you should set '3/4' after TIME SIGNATURE. With one exception you can only set simple time signatures here, but that does not mean you cannot create a compound time signature, like 6/8. To use any compound time signature select it's simple equivalent and programme using eighth note triplets instead of straight eighth notes. For example, for 6/8 use 2/4, for 9/8 use 3/4,for 12/8 use 4/4 and so on. However, one compound signature is available in 6/4, which can be used as 6/8 if you double all of the note values and the tempo.

## 4.17.6 Different Input Modes

In the RECORD SETTING section you can make basic tonal settings for your COMPOSER memory, which will ensure that the pattern plays correctly when you finally use it. KEY and CHORD allow you to set the input key. If you have discovered a useful pattern in the key of D Major, set KEY to D and CHORD to major. If your pattern is in a minor key remember to set CHORD to minor. These settings are critical if you are recording a pattern in a key other than C major, as the pattern will play in the wrong key or with the wrong notes when you finally use it.

BASS TYPE and ACCOMP TYPE control whether or not the Bass and Accomp parts react to seventh chords. This relates to when you finally

play the pattern on the keyboard, if you set both the BASS TYPE and ACCOMP TYPE to NORMAL the pattern will not alter when you play seventh chords. If you set them to 7TH, the pattern will be altered automatically when you play a seventh chord, to include the seventh note (Eg: a Bb in the key of C).

## 4.17.7 Using the INTRO, FILL-INS and ENDING from a preset pattern.

Using FILL-IN SELECT you can assign the INTRO, FILL-INS and ENDING from a preset pattern to your chosen COMPOSER memory. But this works only if the COMPOSER is in NORMAL mode! This function can save you a lot of time in preparing a usable and complete pattern.

As you have now completed all settings for your new COMPOSER memory you can return directly to the COMPOSER page 'RECORD MEMORY:A' by pressing EXIT.

## 4.18 Copying INTRO, FILL-INS and ENDING for use in EXPAND mode.

In EXPAND mode four COMPOSER memories in both MEMORY A and B are assigned to INTRO, FILL-IN 1& 2 and ENDING. It is possible to copy the INTRO, FILL-INS or ENDING of any preset pattern into one of these locations, thus creating your own customized pattern. (For example you could have the INTRO from one preset pattern, the FILL-INS from another and the ENDING from yet another)

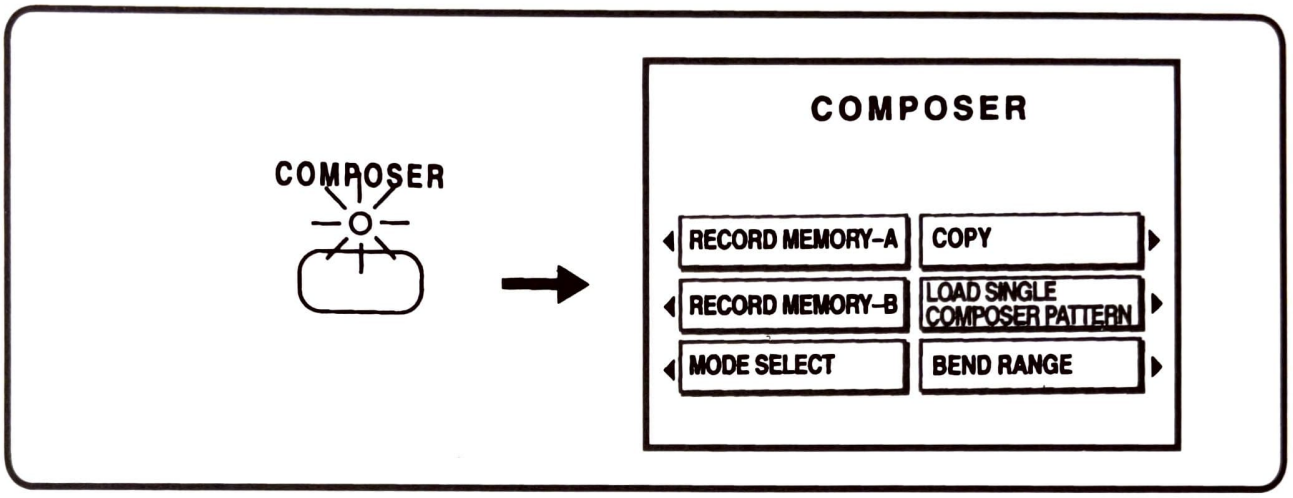
To do this, select COPY on the main COMPOSER page. There will now be in the screen a FROM box and a TO box. At the bottom of the FROM box are three switches which allow you to select the pattern group to copy from (GRP), the specific rhythm (RHY) and the various components of that rhythm (PTN). If you change the PTN selection you will find all of the main components of the rhythm, as follows:-

**NORMAL**
**INTRO**
**FILL IN 1**
**FILL IN 2**
**ENDING**
**VARIATION**
**FILL IN 1 VARI**
**FILL IN 2 VARI**

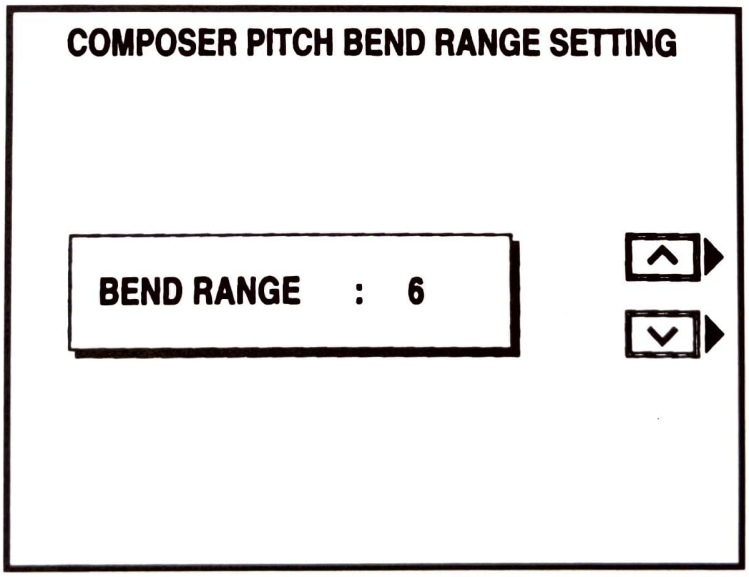
In the TO box you can select into which memory group you are going to copy, and which Composer memory, including the INTRO, FILL-IN 1 & 2 and ENDING. Using this feature you can create a pattern in EXPAND mode and save a lot of time by 'borrowing' the INTRO, FILL-INS and ENDING form pre-set patterns.

## 4.19 BEND RANGE in COMPOSER

In the COMPOSER main menu there is one more switch labelled BEND RANGE.

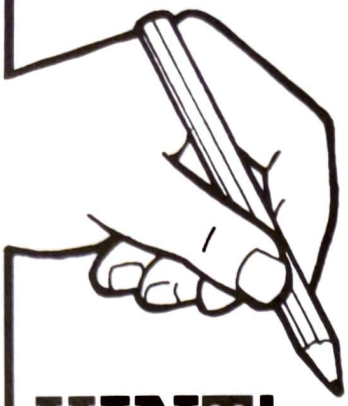



If you press BEND RANGE the BEND RANGE SETTING page appears,




on which you can set the range for the pitch bend wheel. This setting is made in semi-tone steps. If you set a 12 you could raise or lower the pitch by a whole octave with the pitch bend wheel though the most useful setting is 2 for two semitone steps.

This setting applies only to the COMPOSER section!



**HINT!**

*Creating your own COMPOSERs becomes really interesting when you create your own INTRO, FILL-INS and ENDING. Of course this means that everything has to be recorded in EXPAND mode. A little hint on this: Keep the INTRO & ENDING short (no more than 4 bars) and when setting your own FILL IN, to keep it usable and appropriate make sure it is not longer than 1 bar.*

# Panel Memory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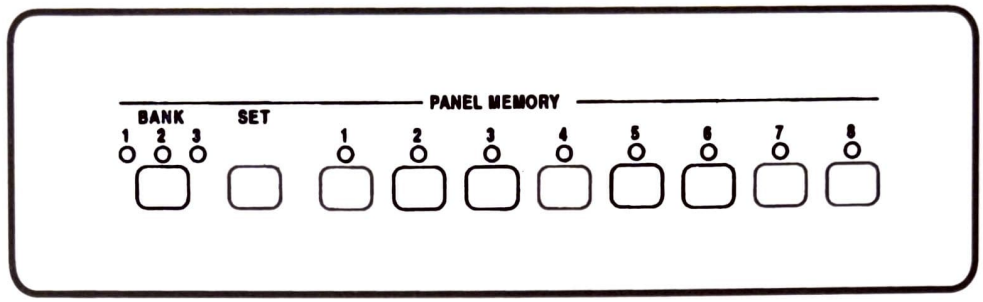
# 5.0 PANEL MEMORY

Complex setting possibilities demand a simple method of storage and it is for this reason that the KN2000 is equipped with PANEL MEMORY. Here you can save all your sound settings in 24 memories.




At first glance you will only see 8 memories, but to the left of the SET button there is a bank button with three LED lights. This means that there are actually three banks of eight PANEL MEMORIES. When the bank button is pressed the LED display will go to the next bank each time (1-2-3-1-2-3-1...). After the third bank you will automatically return to the first bank.

**Bank 1 = PANEL MEMORIES 1 - 8**

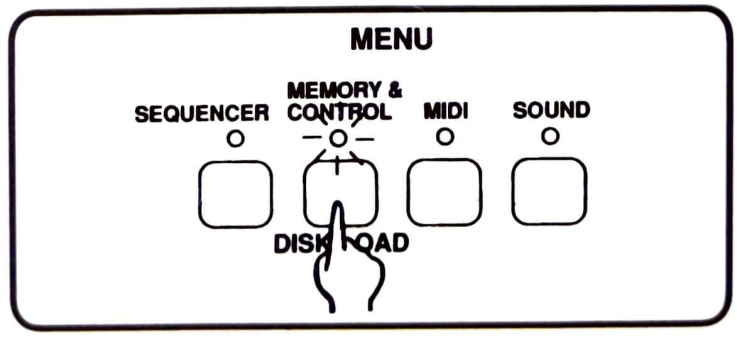
**Bank 2 = PANEL MEMORIES 9 - 16**

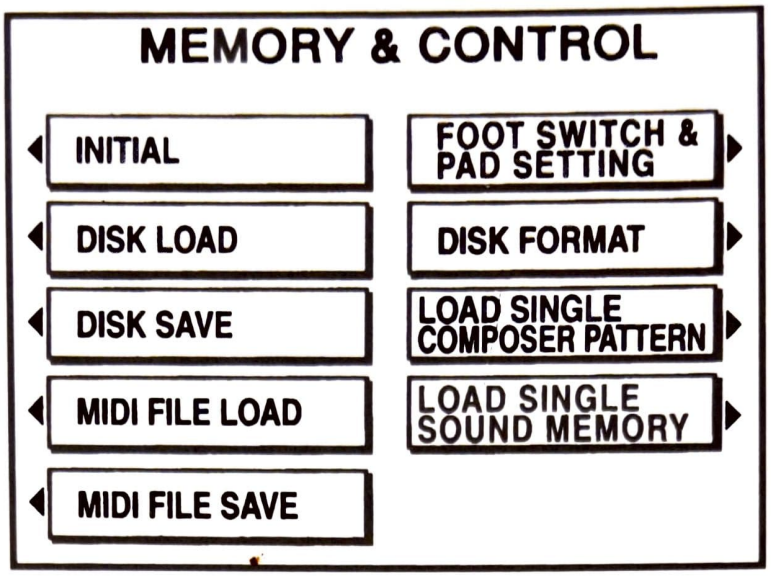
**Bank 3 = PANEL MEMORIES 17 - 24**

In the KN2000's initial condition all PANEL MEMORIES contain factory set sound combinations. These settings should be regarded simply as suggestions and can be overwritten (simply by storing something new). If you have overwritten the factory settings and want to restore them just initialize the PANEL MEMORY.

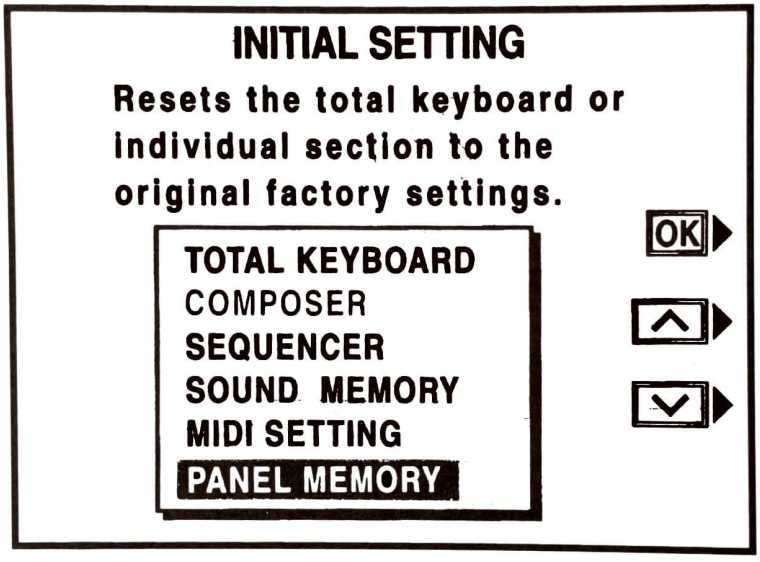
## 5.1 Initializing the PANEL MEMORY

To initialize proceed as follows: First press the MEMORY & CONTROL menu button:






Then select INITIAL in the LCD screen. The display will now ask which part of the keyboard you want to initialize.




With the Up/Down buttons highlight PANEL MEMORY. Confirm this operation with OK! Now a friendly warning will appear as your settings (in PANEL MEMORY) will now be deleted. If you want to abort the procedure press NO, but if you want to proceed (possibly after saving your settings on disk) press YES.

## 5.2 Factory Preset Settings

You can now try out the preset settings one by one. Every setting has been given a name. The list of names you will find in your "KN2000 REFERENCE GUIDE" on page 8.

Bank 1 contains layered sounds, in which RIGHT 1 and RIGHT 2 are both switched on.

Bank 2 contains 'split' sounds. The LEFT part is set with a bass sound and an appropriate split point is set. If in the CONDUCTOR only Right 1 is switched on a suitable sound will be found under RIGHT 2, so you can change sounds just by pressing RIGHT 2.

Bank 3 has been set with classical, ethnic and drum combinations.

If you set the PANEL MEMORY into EXPAND mode (see: **5.4 Panel Memory Modes**) and appropriate Rhythm and tempo will be selected to match the setting.

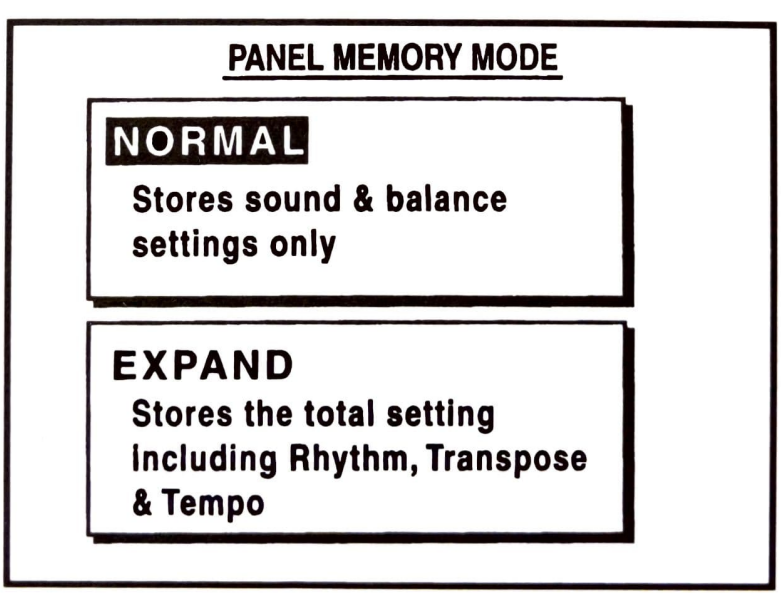
## 5.3 Storing your own PANEL MEMORIES

To save your own keyboard settings (sound choice, volume balance) in PANEL MEMORY just press and hold the SET button and then press the PANEL MEMORY into which you want to store the setting.

## 5.4 PANEL MEMORY modes

If in addition to the sound choice and balance you also want to store the selected rhythm pattern and tempo, PANEL MEMORY first has to be switched to EXPAND mode.

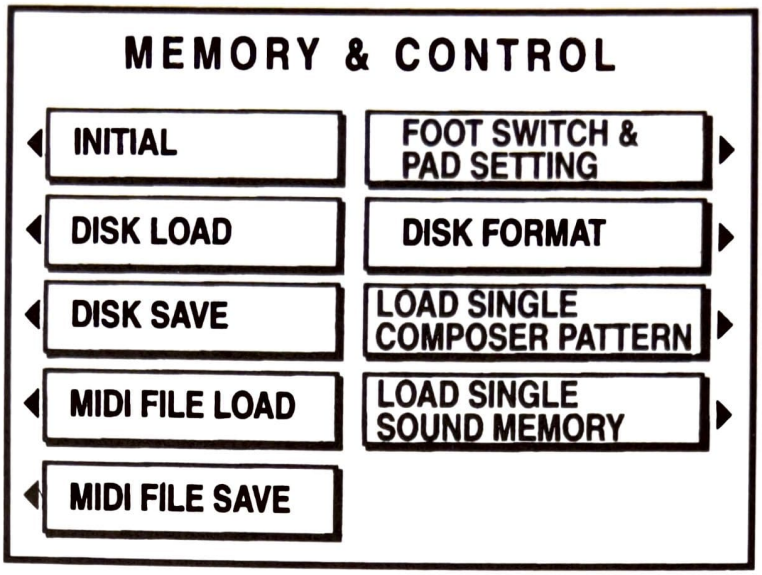
This is very simple, just press and hold the SET button for a few seconds and the display will automatically change to the mode selection page. As this is an EASY SETTING function to keep this page from disappearing press DISPLAY HOLD.


PANEL MEMORY MODE
NORMAL
Stores sound & balance settings only
EXPAND
Stores the total setting Including Rhythm, Transpose & Tempo

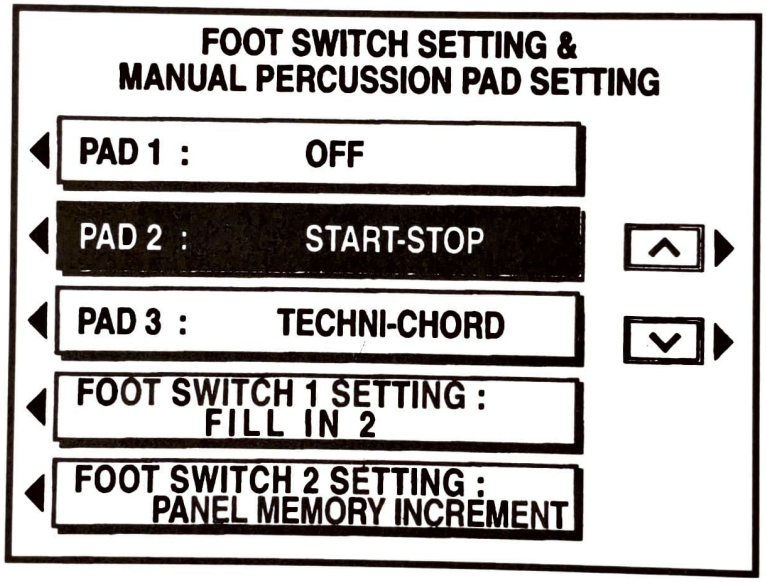
On this page two modes of operation are available: NORMAL and EXPAND. To enable PANEL MEMORY to store items such as Rhythm, APC Mode, Tempo, Transpose set it to EXPAND mode.

## 5.5 Changing by Foot Switch

To change from one PANEL MEMORY to another you can also use a foot switch. To enable this press the MEMORY & CONTROL menu button again.




and then select FOOT SWITCH & PAD SETTING.


FOOT SWITCH SETTING & MANUAL PERCUSSION PAD SETTING
PAD 1 : OFF
PAD 2 : START-STOP
PAD 3 : TECHNI-CHORD
FOOT SWITCH 1 SETTING : FILL IN 2
FOOT SWITCH 2 SETTING : PANEL MEMORY INCREMENT

The KN2000 can use two footswitches, so depending on to which socket your footswitch is connected press the appropriate button in the screen. With the Up/Down buttons or with the TEMPO/PROGRAM wheel scroll through all of the available functions until you reach PANEL MEMORY INCREMENT. Each time you press the footswitch the PANEL MEMORY will advance by one step.

Alternatively you can set one specific PANEL MEMORY to be selected when you press the footswitch. To leave this function just press MEMORY & CONTROL again.

# Sound Edit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# Sound Edit


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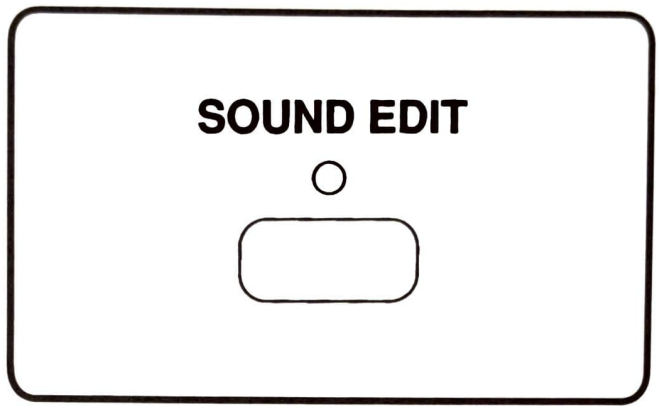
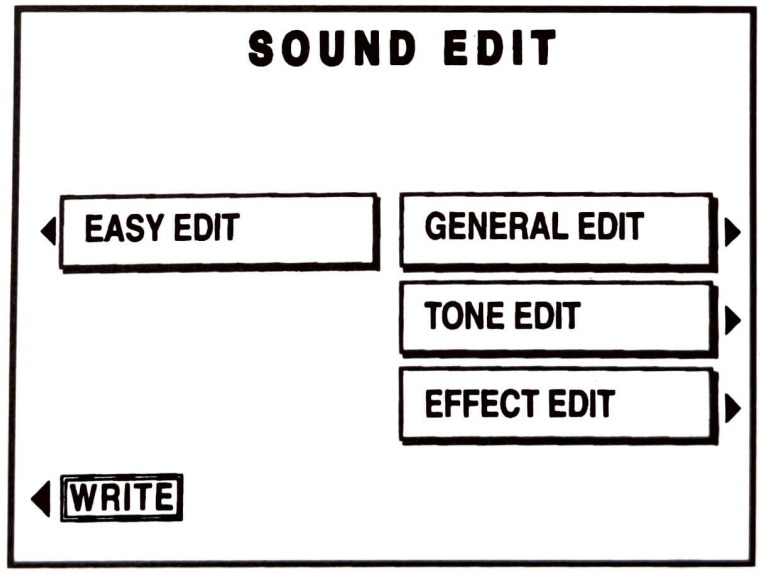
# 6.0 SOUND EDIT

Even if the KN2000 had 500 sounds these would probably still not be enough to satisfy everybody's taste. This is why the KN2000 has been equipped with an extensive sound editor to help you edit a particular sound to your own taste or for a specific application, or of course to create totally new sounds.

If you press the SOUND EDIT button, below the SOUND GROUPS,



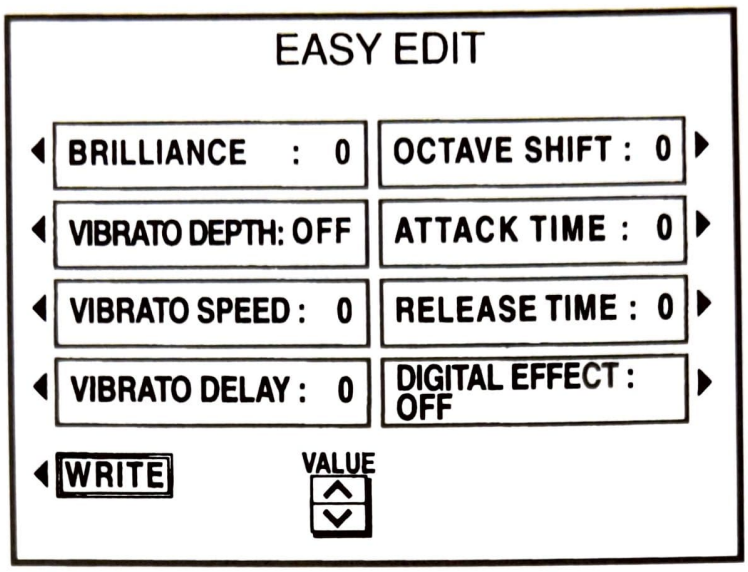

The SOUND EDIT main menu will appear.




In this screen you decide which direction to take when changing a sound.

# 6.1 EASY EDIT

The EASY EDIT function is used to make simple and quick changes to a sound. Select EASY EDIT.




Here you have the 8 most important parameters at a glance - editing a sound couldn't be easier! All you have to do is to activate the desired parameter and then change the settings with the VALUE switch on the lower edge of the display. This can be done more quickly with the TEMPO/PROGRAM wheel.

All changes are made relative to the current setting of each parameter in the chosen sound, so at first each parameter is set to 0. Changes are made by plus or minus 10 steps, allowing you to increase or decrease each parameter.

**BRILLIANCE** is like a tone control and alters the brightness of the sound. So, if you want a smoother, warmer sound adjust BRILLIANCE to a minus setting. If you want it brighter and sharper, adjust to a plus setting.

**VIBRATO DEPTH** controls the intensity of the vibrato in the chosen sound. If you go below -10 the vibrato effect is turned off.

**VIBRATO SPEED** is a setting which is often not to everybody's taste, so here you can make your adjustments easily and quickly.

**VIBRATO DELAY** sets the time delay before the vibrato starts. Set a plus number if you want a longer delay and set a minus number for less delay or -10 if you want no delay. (the vibrato will start immediately).

**OCTAVE SHIFT** allows you to alter the pitch of the sound in octave steps in a range of +/-2 octaves.

**ATTACK TIME** changes the attack time of a sound. To add a slower attack to a sound set a plus value and to add a faster attack set a minus value.

**RELEASE TIME** controls the 'dying-away' of a sound - not to be confused with SUSTAIN. Here it is the fading-time of a sound after the key is released, as in a bell sound.

**DIGITAL EFFECT** is a selection switch for the 12 different digital effects available for each sound. DIGITAL EFFECT can also be turned off altogether (position OFF).

Use the **WRITE** button to store your edited sound in one of the 36 sound memories.

## 6.2.0 Storing Sounds

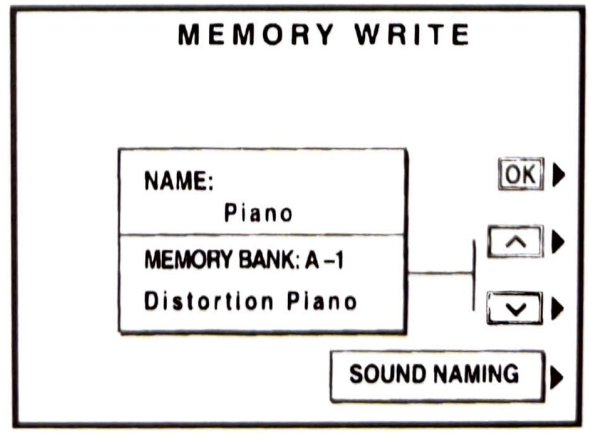
On almost every page in SOUND EDIT there is a WRITE button. It comes up so frequently to help you store your sound immediately and directly from almost any editing process.

## 6.2.1 Structure of Sound Memories & Preset Sounds

The sound memories are divided into groups A and B. These work in the same way as preset SOUND GROUPS so there are 18 individual sounds that can be saved in each MEMORY. When the KN2000 is first switched on or initialized there are edited sounds already installed in all the sound memories. These have been preset and can be replaced at any time. However, you will never lose them for good as they can be restored by initializing the KN2000.

## 6.2.2 How to Store your new sound

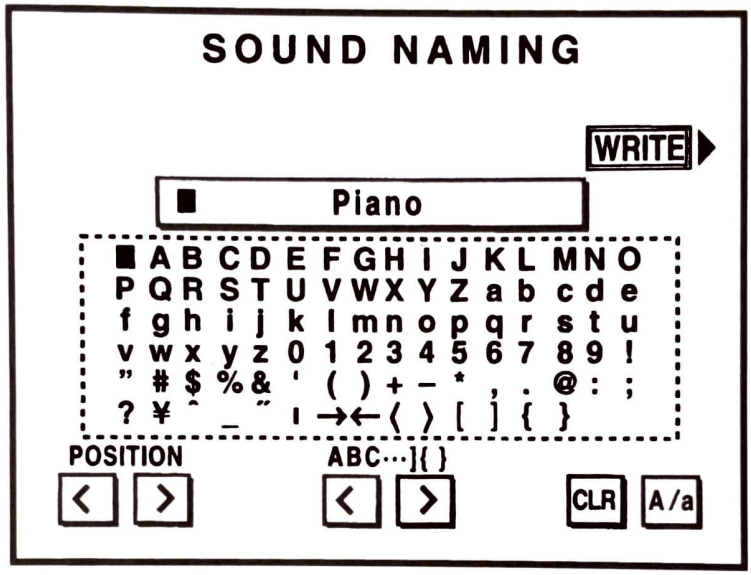
If you press WRITE on any page the MEMORY WRITE display appears.



Under NAME you find the name of the sound to be saved (at the moment this will be the name of the original sound that you edited) and next to MEMORY BANK the memory in which it is to be saved. With the Up/Down keys on the right-hand edge of the display you can decide in which memory to save your new sound. Each memory chosen will be indicated along with its present setting.

## 6.2.3 Sound Naming

If you want to give a new name to a sound to be saved, then press SOUND NAMING now.




## 6.2.4 Preparation for Sound Naming

This sort of display appears in several places on the KN2000. You can write a name comprised of up to 16 letters or characters. If the sound name is to be changed completely first press CLR on the lower edge of the display. You can now enter your new sound name from scratch.

## 6.2.5 Input of Sound Name

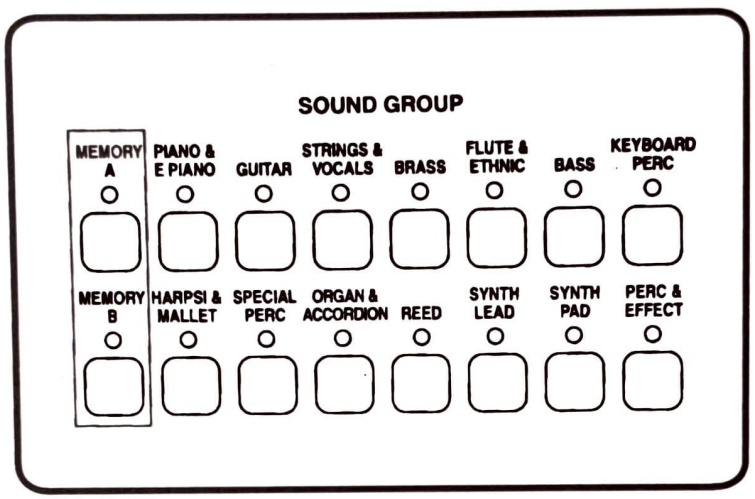
Use the two POSITION keys (<>) on the lower edge of the display to move the cursor inside the writing field to the starting position. With the other two character keys (ABC...]()) you select the necessary letters/characters for your new name from the lower list - here again the TEMPO/PROGRAM wheel is much faster. The A/a switch enables you to switch from upper to lower case letters and vice versa. This will save you a lot of endless 'cursor trips'!

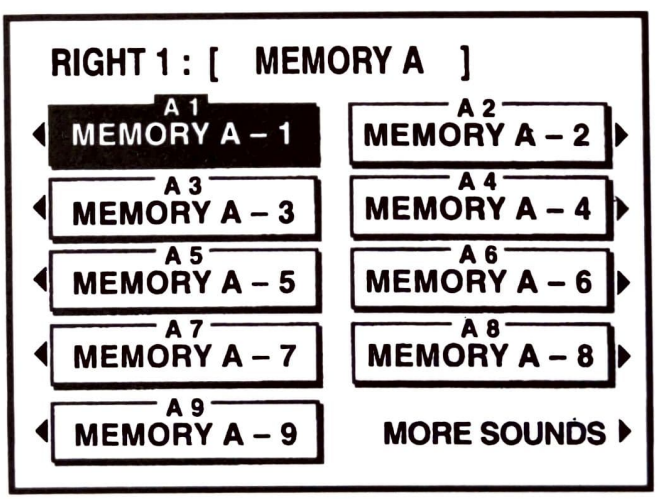
## 6.2.6 After Input

When you have finished writing the name press WRITE again to return to the MEMORY WRITE page. Under NAME your new name should now be indicated.

Now select a suitable place to store your new sound. Take care not to write over a sound you want to keep. Finally you confirm this storing process by pressing OK. The display will again confirm the process.

Press MEMORY A or B (depending where you stored your new sound) and you will see your sound displayed on the sound selection list.



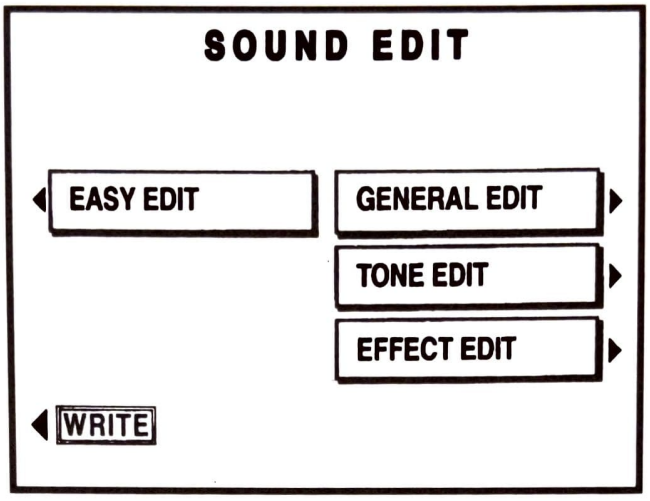




## 6.3.0 EFFECT EDIT

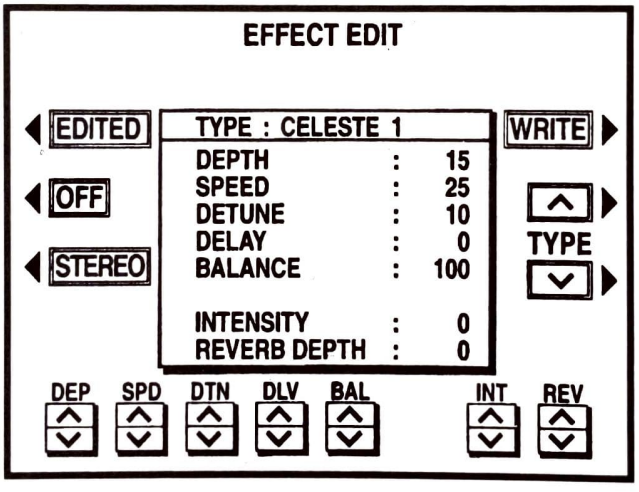
The best Jazz Organ sound would be nothing without a good Tremelo (Leslie) effect, and the best Electric Piano could be lacking without a chorus effect. In the KN2000 each sound is equipped with an appropriate DIGITAL EFFECT.

If the DIGITAL EFFECT is particularly important to a specific sound (as with Jazz Organ or Electric Piano) it will automatically turn on when you select that sound. The entire DIGITAL EFFECT unit comprises 12 different effect settings.

From the SOUND EDIT main menu




Select EFFECT EDIT




The box in the centre of the screen shows the current effect type as well as it's different parameters. With the two Up/Down buttons (TYPE) on the right-hand edge of the display you can alter the effect type.

Here are the 12 effects at a glance:

| | | |
|---|---|---|
| **CELESTE 1** | **ENSEMBLE 1** | **SINGLE DELAY** |
| **CELESTE 2** | **ENSEMBLE 2** | **REPEAT DELAY** |
| **CHORUS 1** | **TREMOLO** | **SOLO EFFECT 1** |
| **CHORUS 2** | **ORGAN TREMOLO** | **SOLO EFFECT 2** |

## 6.3.1 The Individual Digital Effects

**CELESTE 1 & 2** — *make a wider sound, similar to CHORUS, and create an undulating de-tuning effect*

**CHORUS 1 & 2** — *are much warmer than CELESTE and have of course the typical CHORUS modulation (movement).*

**ENSEMBLE 1 & 2** — *simulate, as the name indicates, an ensemble character - so one trumpet played becomes several trumpets. In consequence DELAY is also a parameter of these effects.*

**TREMOLO** — *creates a volume modulation in 4 different wave forms:*

*SIN= Sine wave*
*TRI= Triangle wave*
*SQR= Square wave*
*SAW= Sawtooth form*

**ORGAN TREMOLO** — *recreates the well-known Leslie or Rotary speaker effect. When the DIGITAL EFFECT button is switched off the effect is set to 'slow' and when it is switched on it speeds up to 'fast'.*

**SINGLE DELAY** — *creates a single echo tone which can be adjusted in terms of delay time and pitch.*

**REPEAT DELAY** — *creates re-iteration familiar with instruments such as Mandolin or Banjo. The repeated tones may even be adjusted in their envelope.*

**SOLO EFFECT 1+2** — *works in a similar way to the EXCITER of the DSP effect. It gives the sound more presence and adds some Distortion and Reverb.*

On the left-hand edge of the display you find the ON/OFF switch for the digital effect. This determines for your edited sound whether or not DIGITAL EFFECT automatically turns on with the sound. The switch below this one sets the digital effect to STEREO or MONO.

## 6.3.2 The Parameters

Each one of these digital effects can be changed in several respects according to taste. For this there are parameters at your disposal which are adjusted from the lower edge of the display.

| | |
|---|---|
| **DEPTH** | [DEP] *sets the intensity of modulation* |
| **SPEED** | [SPD] *controls the speed of modulation* |
| **DETUNE** | [DTN] *controls the degree of de-tuning that the effect causes* |
| **DELAY** | [DLY] *controls the delay time* |
| **BALANCE** | [BAL] *controls the balance between sound and effect* |
| **WAVE** | [WAVE] *sets the desired wave form* |
| **KEY SHIFT** | [KEY] *changes the pitch of the repeated tone* |
| **DECAY** | [DCY] *changes the fading time of the repeating notes* |
| **SUSTAIN** | [SUS] *sets the level repeating notes after the decay has finished* |
| **RELEASE** | [RLS] *sets the length of the repeating notes after the key is released* |
| **DISTORTION** | [DIS] *turns distortion on/off* |
| **TOUCH DEPTH** | [TCH] *controls the relation to touch dynamics* |
| **INTENSITY** | [INT] *regulates the loudness* |
| **REVERB DEPTH** | [REV] *allows for individual reverb setting* |

The EDITED/ORIGINAL button on the left-hand edge of the display appears in nearly all of the SOUND EDIT screens and allows you to compare your new settings with those of the sound that you are editing.

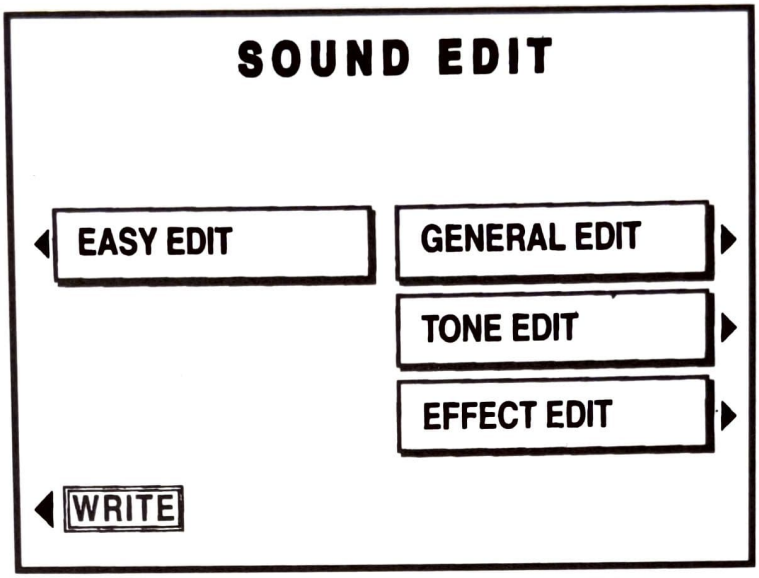
The EDITED/ORIGINAL button displays the current status of the screen, in other words when it says EDITED the sound you hear is your new edited one. When you press the EDITED button the keyboard returns to the settings of the original sound, and the button displays the word ORIGINAL. When you press this button again you return to your edited settings.

The different digital effects are essential components of each sound and should therefore always be taken into consideration when you are creating new sounds.

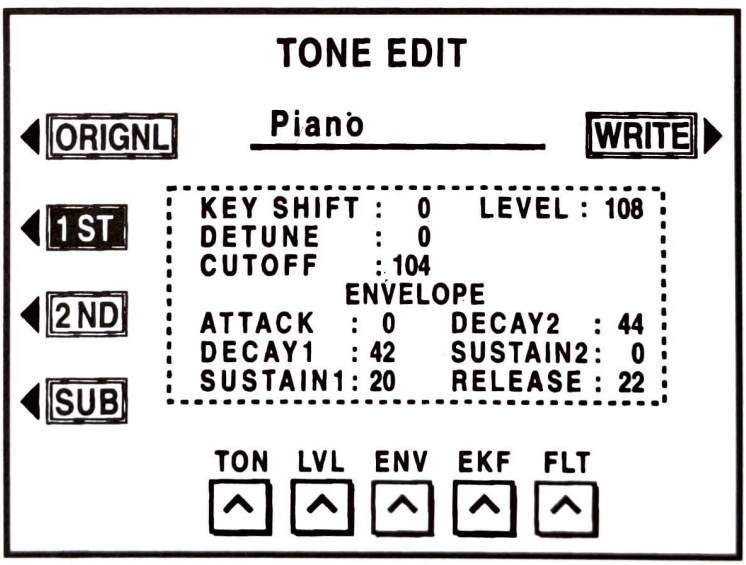
# 6.4.0 TONE EDIT

The tone edit section could be regarded as the essential sound edit section, as the basic characteristics of a new sound are created here. Here you decide of which samples the sound is to consist and control the envelope and the setting of the digital filter.

To use TONE EDIT you first have to select the SOUND EDIT main menu.



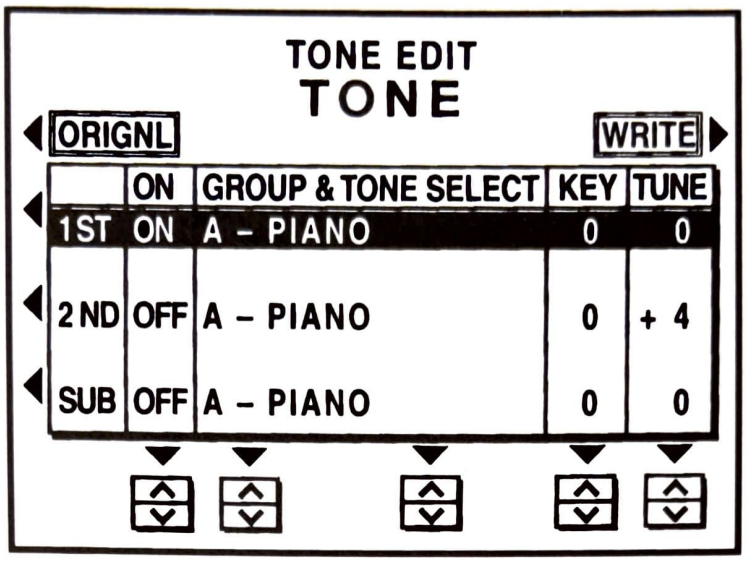

Select TONE EDIT. The display will then show the TONE EDIT main menu.



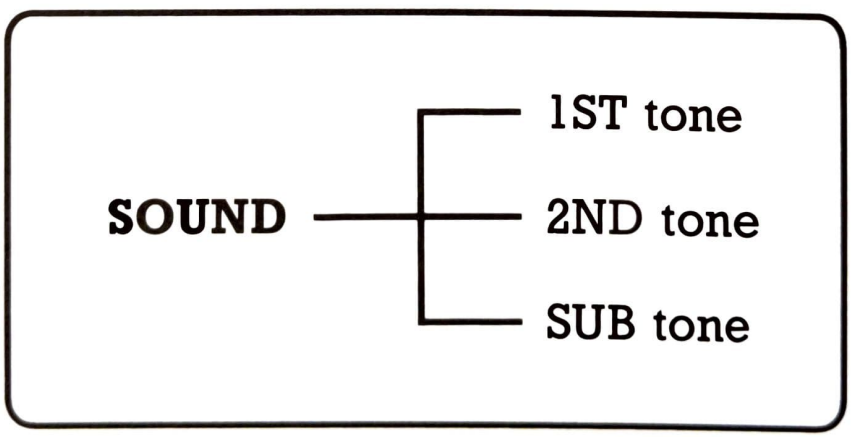

On top you find the name of the sound to be edited, and in the box below an overview of the sound parameters presently set. But as you cannot make any changes on this page we will not look at it any closer. Of most importance are the switches on the lower edge of the display: with these you switch into the individual editing sections. When editing a sound you will end up on this page now and again to get into a different editing section.

# 6.4.1 What are TONES?

First press the TON switch on the lower edge of the display.




The display which appears now shows you the components of the sound. A sound on the KN2000 can be composed of up to three PCM samples which are called TONES. It is not necessary to use all three TONES for all sounds, some sounds might only use one or two TONES. For example a Tenor Sax sound might use a basic Sax sample combined with Breath Noise. Also, you could create sound combinations such as Piano and Strings - to do this you would otherwise need two sound groups (RIGHT 1+2). The choice of TONES you make here is the basis for the entire character of your new sound.




The so-called SUB TONE is really just another (third) TONE which can be added to the other two TONES. It is called SUB sound because if the total polyphony of the KN2000 is exceeded it would drop out of the sound.

## 6.4.2 Selecting TONES

Let's look again at the 'TONE' display. With the switches on the left-hand edge of the display you can now select one of the three TONE rows. In the 'ON' column you can see which of the three TONES is switched on. The switch for this is located at the bottom of the 'ON' column. By switching the individual TONES (1st, 2nd, SUB) on or off you decide how many TONES are combined. In the GROUP & TONE SELECT column you decide on the samples you want to use for your mixture of TONES. To speed up the selection of TONES they are categorised into groups.

In the KN2000 REFERENCE GUIDE you will find on page 11 a list of all the 250 TONES in order of groups. This list is very helpful when looking for suitable TONES - so you don't have to remember all of the 250 TONES that are available! Not all of the TONES are samples of an instrumental sound, there are also a great number of synth and effect sounds. In the DRUMS & PERCUSSION group alone there are 56 samples. Please regard these single TONES as raw material with which to work on your sound creations.

Use the button under the GROUP column (on the lower edge of the display) to step through groups A - N. Then to choose the desired sample in the selected group use the next button on the right under the TONE column. When you have pressed the button under the TONE select column you can use the TEMPO/PROGRAM wheel to speed through the available TONES.

When you have decided on a sound sample for the 1st TONE and want to add another under '2nd' make sure that you turn '2nd' ON!

## 6.4.3 Pitch Adjustment of TONES

In the KEY column you set the pitch of the TONE you have chosen. With the switch below the KEY column you can move up and down by semitones. If you write '+12' your TONE will be raised by one octave. The TONE can be changed by +/- 2 octaves. This function is very important for example to create octave sounds such as Octave Piano. For this you would need a piano sound in 1st and 2nd, and for one of the two TONES, 'KEY' is set one octave (+12) higher.

In the last column, TUNE, you can 'fine-tune' each TONE. With the switch below the TUNE column you can raise or lower the TONE by up to a semitone. If the same TONE is set for 1st and 2nd you can create some pleasant de-tuning or 'out of tune' effects this way. Sometimes it is this 'out-of-tune'- effect which gives the overall sound the desired richness, or creates a special sound such as Honky Tonk Piano.

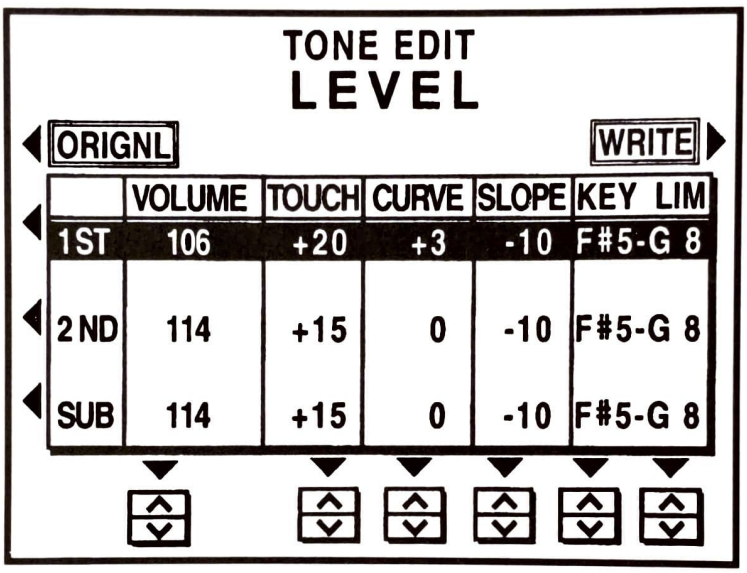
With the ORIGINAL/EDITED switch you can compare your new settings to the previous ones on this page as on the following pages. And WRITE allows you to store the new sound (see: **6.2.0 Storing Sounds**).

Use the EXIT button to return to the TONE EDIT main menu.

## 6.4.4 Balancing TONES against each other

The following chapter deals mainly with how to set the volume and the touch response of the three TONES.

First press the [LVL] button in the TONE EDIT main menu.




In this display you will also find the division into three sound components 1st, 2nd, and SUB. Depending on which row you select you can make your settings in the individual columns. To do this use the switches on the lower edge of the display which correspond to the respective columns.

## 6.4.5 Volume Adjustment

In the VOLUME column you set the volume of the respective TONES - a very important function, as it is the right volume balance between the 3 (possible) TONES which produces the perfect overall sound. Make sure that the overall volume is not too high to avoid your new sound 'sticking out' among the other sounds. (For example, in performance when changing from a preset sound to your edited sound the volume level of the sound should not be dramatically higher, unless that is the effect that you want!)

## 6.4.6 Touch Adjustment

In the TOUCH column the touch response for each TONE is controlled. Here you decide how strongly you have to press a key to reach the volume value indicated under VOLUME. You can make these settings in + or - figures. With a minus value the touch dynamics are reversed (negative): the harder you press a key the quieter the TONE.

It is possible to create what is known as a 'velocity switch' by setting one TONE to a plus value for touch, and another to a minus value. You could for example have a Brass sound when playing softly and Strings when you play harder.

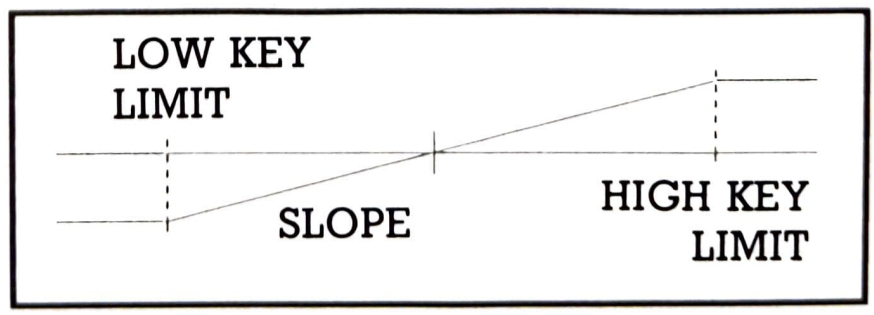
The CURVE column allows you to set a touch curve for the volume change. This function is linked to TOUCH in that it alters how far the volume changes for a specific velocity. So if you set CURVE to +3 (it's range is from -3 to +3) the maximum volume will be achieved at a lower velocity than if it were set to 0, or a minus figure.

## 6.4.7 SLOPE and KEY LIMIT

The SLOPE and KEY LIMIT columns are dealt with together as they are closely connected. Basically, they limit the settings made previously under VOLUME and TOUCH to a particular section of the keyboard. More precisely: you can raise the volume for a limited section of the keyboard. This function was established as there are sounds which for example in their upper sector might be too thick or too loud.

Under KEY LIMIT, decide on a section of the keyboard in which the volume is to be changed. If you have written 'C3'-'C5' the volume will be changed in this section.

Then, using SLOPE decide how you want the level to change in that section of the keyboard. If you want the level to get gradually louder moving up the keyboard, set a plus value. Conversely if you want the level to get quieter moving up the keyboard set a minus value. The higher the value (plus or minus) the greater the change.



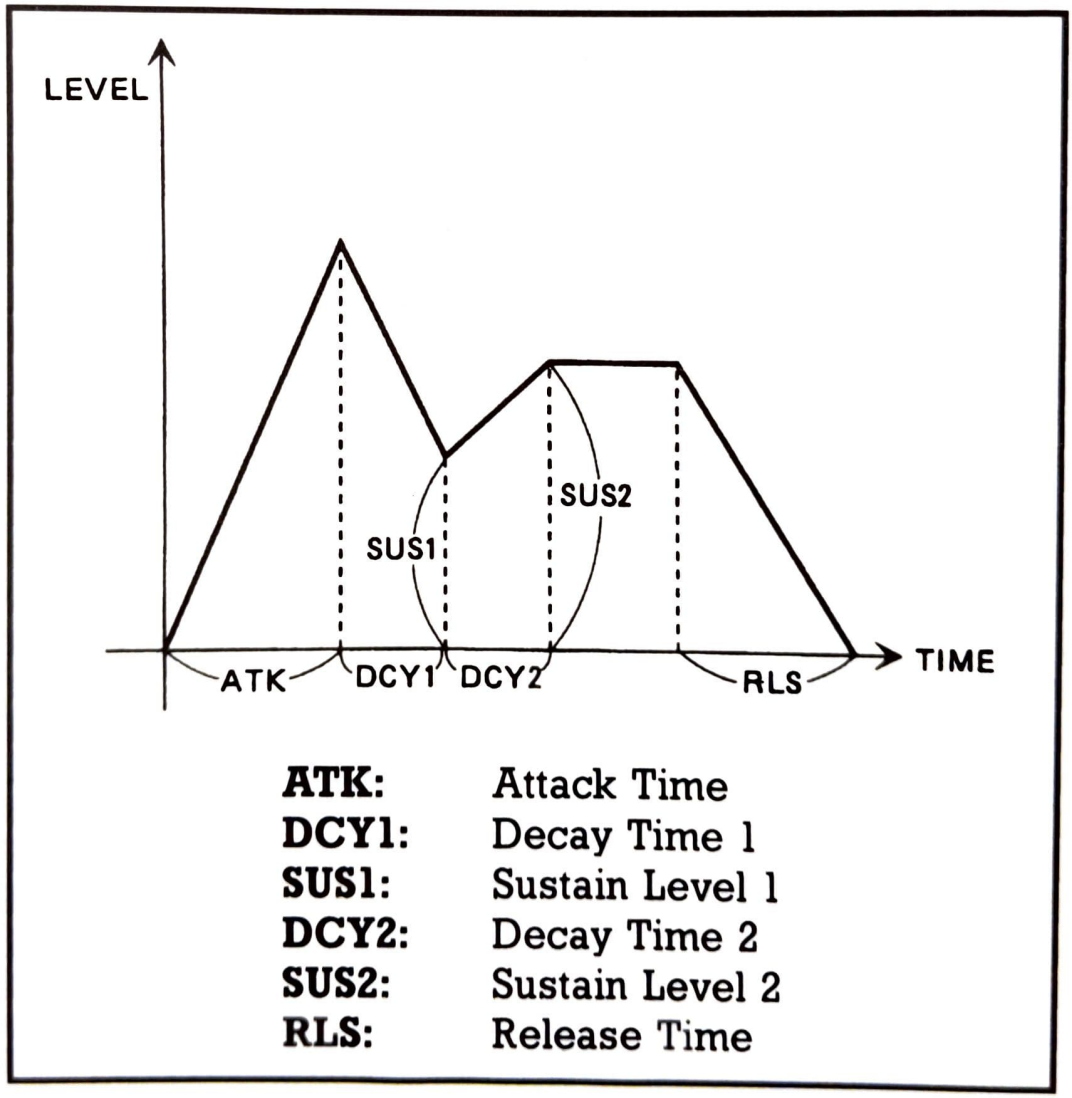

After you have set your volume you can leave the LEVEL page with EXIT to return to the TONE EDIT main menu.

# 6.4.8.0 ENVELOPE

ENVELOPE means the shape of the sound, that is to say it's attack and decay characteristics.

If you take a closer look, you will realize that every known sound has a beginning and an end - the moments when you press down the key to start the sound and when you let go to end it.Some sounds build up in volume very slowly, and some sounds will linger a bit after the key has been released, For instance: Pan-pipes always have a slow attack (after the key has been pressed) and a Bell sound will ring on a bit after the key is released, whereas the piano appears immediately after the key is pressed and dies away much quicker after it is released. Organ sounds will stay at the same volume while the key is pressed, but Guitar sounds die away until they disappear.

All these sound characteristics such as lingering, slow attack or percussive characteristics can be shown graphically by the ENVELOPE.

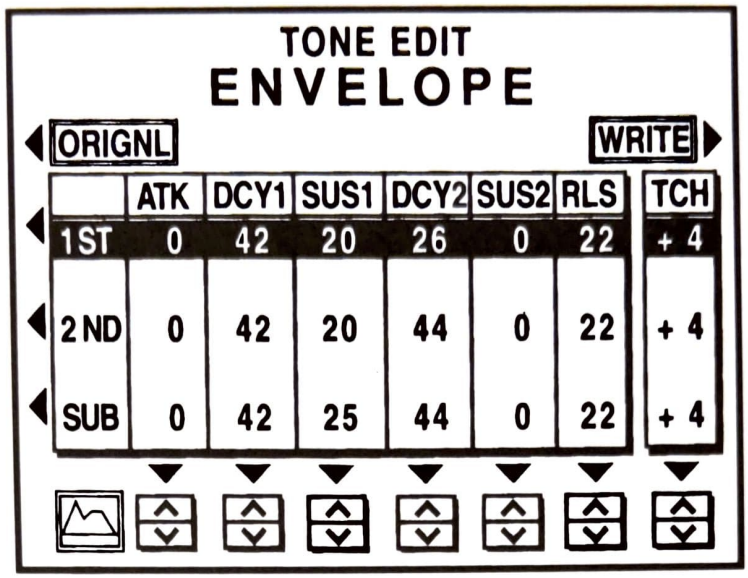



**ATK:** Attack Time
**DCY1:** Decay Time 1
**SUS1:** Sustain Level 1
**DCY2:** Decay Time 2
**SUS2:** Sustain Level 2
**RLS:** Release Time

In this image of an envelope you can see the development of a TONE from the first touch on the key until the release of the key.

# 6.4.8.1 Display and Functions

If in the TONE EDIT main menu you activate the ENV switch ENVELOPE page will appear in the display.




Here you see the three TONES 1st, 2nd, and SUB divided into exactly the same time periods as in the graphic illustration of an envelope on the preceding page. For each time period there is a column and a corresponding switch on the lower edge of the display.

The first time period ATTACK (ATK) sets the increase time for the tone directly after the key is pressed. If you set a very low value (0-3) here the tone will start directly after the key is pressed. If you set a higher value the tone will slowly increase.

The second period of time DECAY 1 (DCY1) sets the decrease time from the highest ATTACK moment on - the time the tone takes to disappear after the attack has finished.

SUSTAIN 1 (SUS1) sets the point at which the level stays after DECAY 1 has finished

With DECAY 2 (DCY2) you can make the TONE increase in volume once more, setting the time it should take to do this. If you set DECAY 2 to 50 the level will stay at the SUSTAIN 1 point.

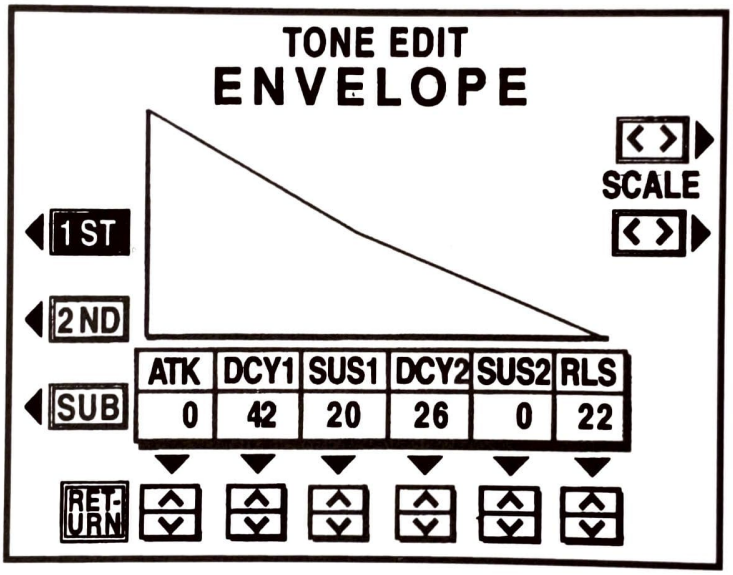
SUSTAIN 2 sets the point at which the level stays after DECAY 2 has finished. If you want the sound to die away whilst holding the key set this value to 0. This leaves RELEASE (RLS) Here you set the time for the TONE to linger after the key has been released (as with a bell effect). A value below 20 will seem to give you almost no lingering at all. However, almost all sounds need at least a level of around 14, as the effect of the sound cutting off immediately when you release the key can be quite unpleasant! Try setting RELEASE to 0 and you'll see what I mean!

Next is the TOUCH (TCH) column where you can set plus or minus figures which determine how the envelope reacts to the dynamics in your performance. With a plus value the ATTACK time gets faster the harder you hit the keys and with a minus value it gets slower the harder you play.

## 6.4.8.2 Displaying the ENVELOPE as a graph

The Envelope display offers you two possible ways of working. The first one is to write value from 0 - 50 into the respective columns and so to create a new envelope 'in your head'. The second is to have the envelope indicated graphically on the display.

To do this you have to activate the switch on the very left on the lower edge of the display. This switch is marked with a graphic envelope symbol.




The figures previously set are now displayed as an envelope graph. With the switches on the lower edge of the display you can now work only on the TONE (1st, 2nd, SUB) activated on the left. If you change the figures now the graphic display will change simultaneously. This way of working is usually much easier as the somewhat abstract figures are immediately converted into a graphical envelope image.

To return to the preceding Envelope page press RETURN (to the very left on the lower edge of the display).

The EDITED/ORIGINAL key serves as usual to compare your new setting to the original setting.

## 6.4.8.3 Practical hints concerning ENVELOPE

The feature name SOUND EDIT is definitive in it's description of the feature, because it means taking a preset sound and editing it, not really creating a sound from scratch (although you can with experience take that approach too).

For example, if you start with Strings, go to TONE EDIT and change the TONE from Strings to Nylon Guitar 1, the sound will be of a Guitar with the Strings ENVELOPE characteristics (ie: a slower attack and with sustain level). To make the sound decay to nothing the SUSTAIN level must be set to 0.

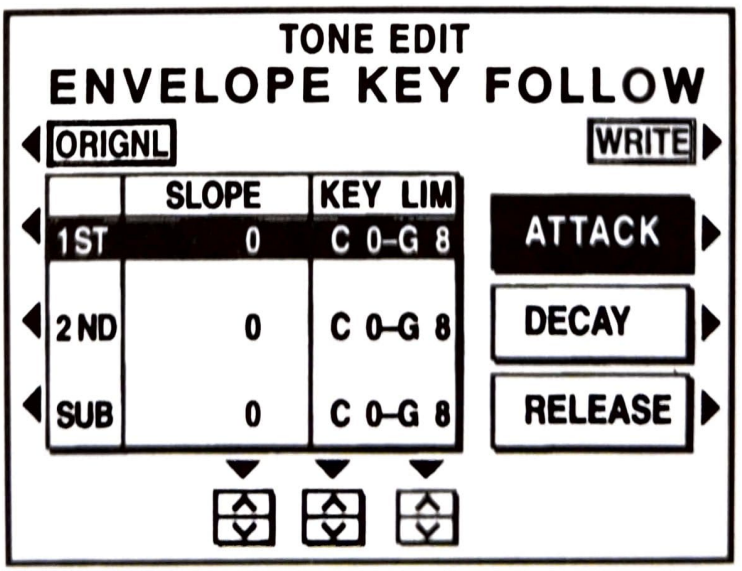
Similarly with Trumpet or Organ sounds (for example) a high value has to be set under SUSTAIN to make the sound continue for as long as the key is pressed.

However, if you want to end up with a Guitar type sound (for example) it is better to start with one close to the edited sound that you want to finish up with.

Once a parameter has been selected with the buttons at the bottom of the display it can be changed with the TEMPO/PROGRAM wheel- this is usually the quicker way.

## 6.4.8.4 ENVELOPE KEY FOLLOW

To make your new sound seem even more realistic the ENVELOPE KEY FOLLOW page has been installed in the KN2000. To get to it press the [EKF] button in the TONE EDIT main menu.



## 6.4.8.5 E.K.F. In General

With the ENVELOPE KEY FOLLOW function you can connect three envelope characteristics (ATTACK, DECAY and RELEASE) to selected sections of the keyboard. In the display illustration above you find the KEY LIM column for all TONES set to C0-G8. This means that the whole keyboard has been set as a section. Under SLOPE you find 0s everywhere meaning that the ENVELOPE KEY FOLLOW function has not yet been activated.

## 6.4.8.6 ATTACK Slope

Suppose you have switched on ATTACK on the right and have now set SLOPE to a plus value (for example +40) The ATTACK time of the TONE activated becomes progressively faster the higher up on the keyboard you are playing. With a minus value under SLOPE the ATTACK time gets progressively slower when you play towards the higher region of the keyboard.

## 6.4.8.7 DECAY Slope

For the DECAY time you proceed the same way. Press DECAY on the right and set a plus value under SLOPE - the DECAY time decreases when you move up the keyboard. With RELEASE the lingering time of the sound changes in the same way.

It only remains for you to set the range of the keyboard in the KEY LIM column over which you want the envelope change to be effective.

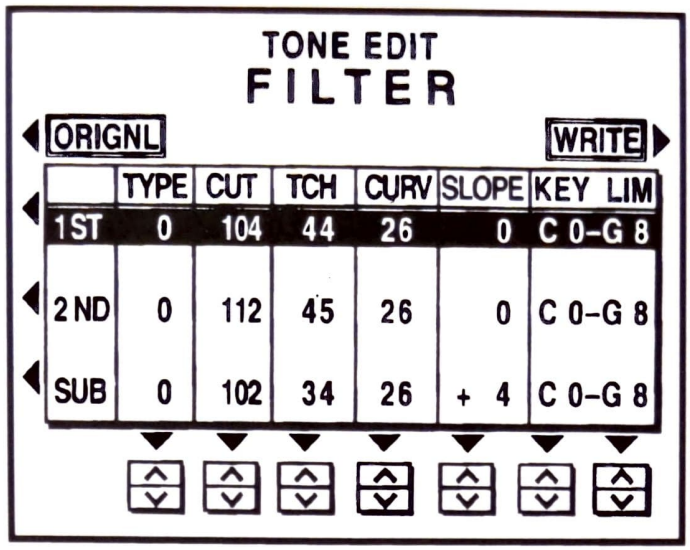
To compare how the TONES sounded before you worked on them use the EDITED/ORIGINAL switch to the top left of the display.

By pressing EXIT you return to the TONE EDIT main menu.

## 6.4.9.0 FILTER

This TONE EDIT chapter deals with the DIGITAL FILTER with which you will usually set the brilliance for your new sound. The digital filter serves to intensify or to suppress certain frequency ranges.

To get to the 'FILTER' display, activate the [FLT] switch in the TONE EDIT main menu on the lower edge of the display.




The TONE buttons are once again on the left of the display (1st, 2nd, SUB) The line for the TONE that you are adjusting is emphasized. The lower switches set the figures for the individual columns.

## 6.4.9.1 The Individual Filters

In the first column (TYPE) you can choose from one of the 6 different filter types.

| | |
|---|---|
| **0** | *is a low-pass filter. Low-range signals remain unchanged. Only high-range signals are filtered out according to the CUT value.* |
| **1 to 4** | *Low-pass/high boost filters - a low pass filter which emphasizes high range signals when a high CUT value is set.* |
| **5 & 6** | *Deep pass filters + resonance - a filter which emphasizes the harmonic components of frequencies. This becomes clear when a high cut value is set.* |
| **THRU** | *simply means that no filter is activated.* |

Try out each filter type with different sounds to find which one suits your particular application.

## 6.4.9.2 Mellow or Bright?

CUT determines the cut off frequency of the filter, in other words frequencies above the range set by CUT are filtered out. This is similar to a tone control on your Hi-Fi system. CUT is probably the function most often used on this page.

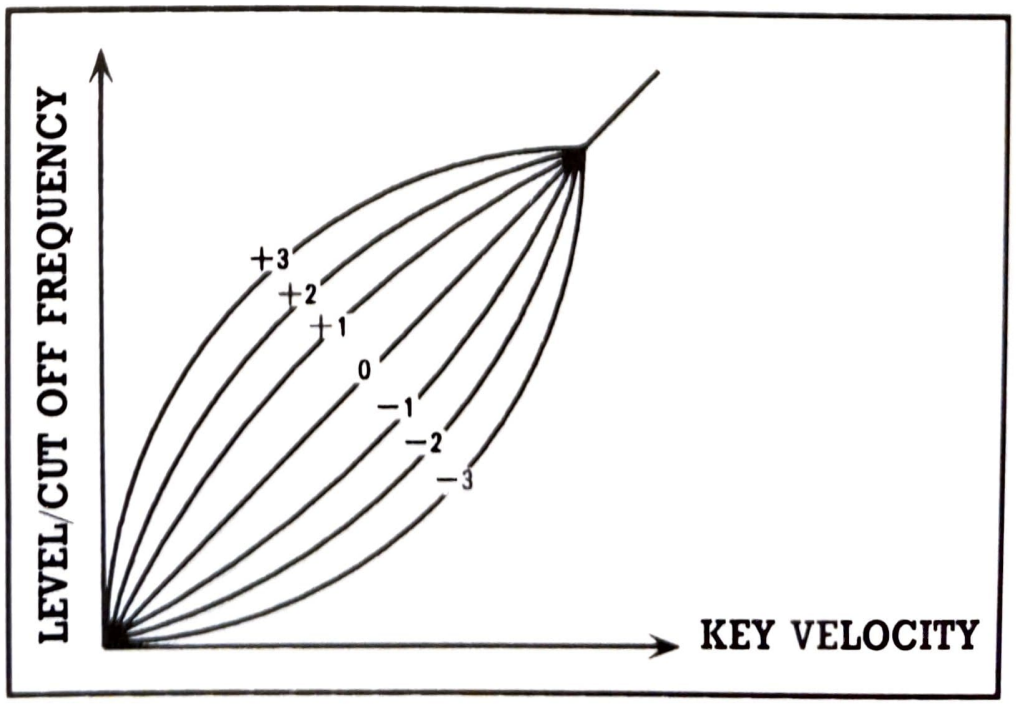
# 6.4.9.3 How the FILTER responds to touch dynamics

The TCH (TOUCH) column determines how the filter responds to velocity, so that the brightness of a TONE will alter depending on how hard you strike the keys. (For example a Piano sound played softly is not just quieter but also mellower). With a value of 0 the TONE is heard with the CUT value that was set no matter how hard you press the keys. With a value of 50 you have to strike the keys very hard to reach the CUT value you set, but if you play softly a much mellower sound will be heard.

The CURVE column allows you to set a touch curve for the filter. This function is linked to TOUCH in that it alters how far the filter opens for a specific velocity. So if you set CURVE to +3 (it's range is from -3 to +3) the maximum brilliance will be achieved at a lower velocity than if it were set to 0, or a minus figure. The SLOPE and KEY LIMIT columns have to be discussed together, as they work together in practice. Basically, this section is about changing the filter for particular sections of the keyboard, as there are some sounds which without this function would be too brash or too weak in certain areas of the keyboard.

Under KEY LIM you set the section of the keyboard for which the filter is to be changed. When C0-G8 is set the change will apply to the whole keyboard.

If you set a plus value (for example. +40) for SLOPE the chosen TONE will be mellow at the bottom end of the keyboard and gradually get brighter towards the top end of the keyboard. With a minus value the sound will be bright at the bottom end of the keyboard and will become mellower the higher up you play.

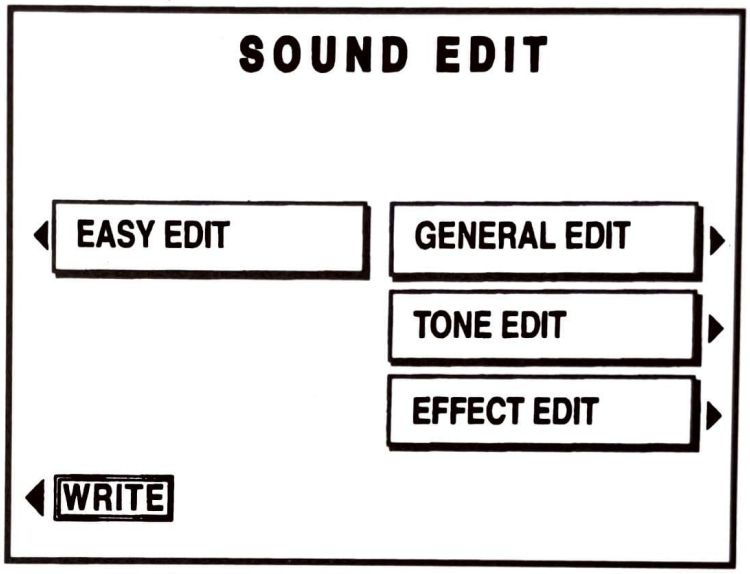


The filter is the most important element of SOUND EDIT in altering what to you might be an unsuitable sound, into a highly usable one. If you find a sound too brash or lacking brilliance adjusting the filter gives you the chance of modifying it to your taste or application.

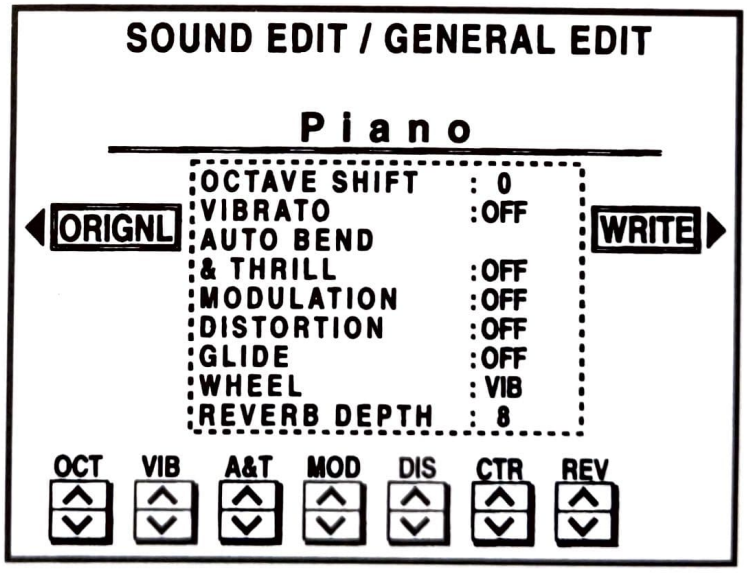
## 6.5.0 GENERAL EDIT

This last SOUND EDIT chapter deals mainly with basic settings for the new sound - like the right octave, vibrato, reverb or the setting of the two control wheels on the left-hand side of the keyboard.

Select SOUND EDIT



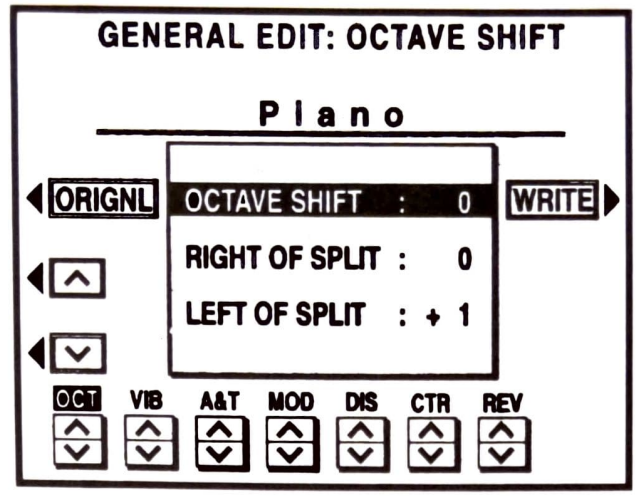

and then select GENERAL EDIT in the screen.




The name of the sound that you are editing appears at the top of the GENERAL edit menu and below this there is a box showing you the current settings. The buttons on the lower edge of the display allow you to select each item shown in the box individually and alter the way it is set. The familiar Up/Down switches appear on the left hand side of the display allowing you to select which row you want to alter for each item and the values can be altered easily using the TEMPO/PROGRAM wheel.

# 6.5.1 OCTAVE SHIFT

The OCTAVE [OCT] function allows you to set the pitch of your new sound.



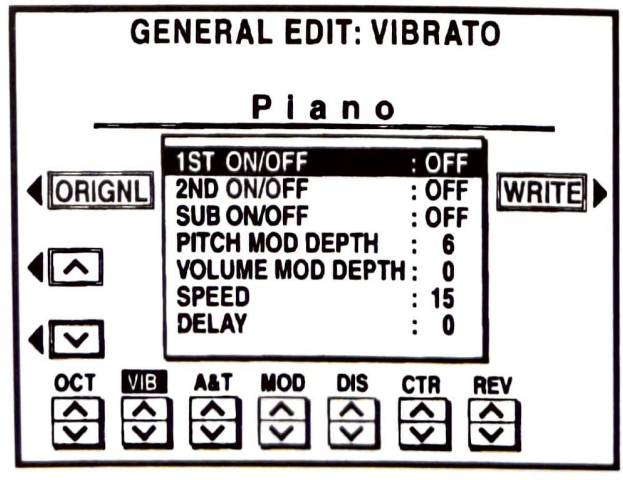

In the upper line you can raise the pitch of the sound in general by 2 octaves or lower it by 1 octave. So, when you set +1 in the OCTAVE SHIFT row the sound will be one octave higher if it is played across the whole keyboard without a keyboard split.

The RIGHT OF SPLIT row allows you to set the pitch of the sound if it is used to the right of the split point. For example when using One Finger or Fingered Auto Play Chord or a LEFT sound, there will naturally be a keyboard split. This will of course limit the range of notes available for the sound. If you want the sound to be an octave higher or lower when it is used to the right of the split point set +1 or -1 in this row. The octave shift will only occur when the sound is used to the right of a split point.

The same applies with LEFT OF SPLIT. This determines the octave pitch of the sound when it is used to the left of the split point.

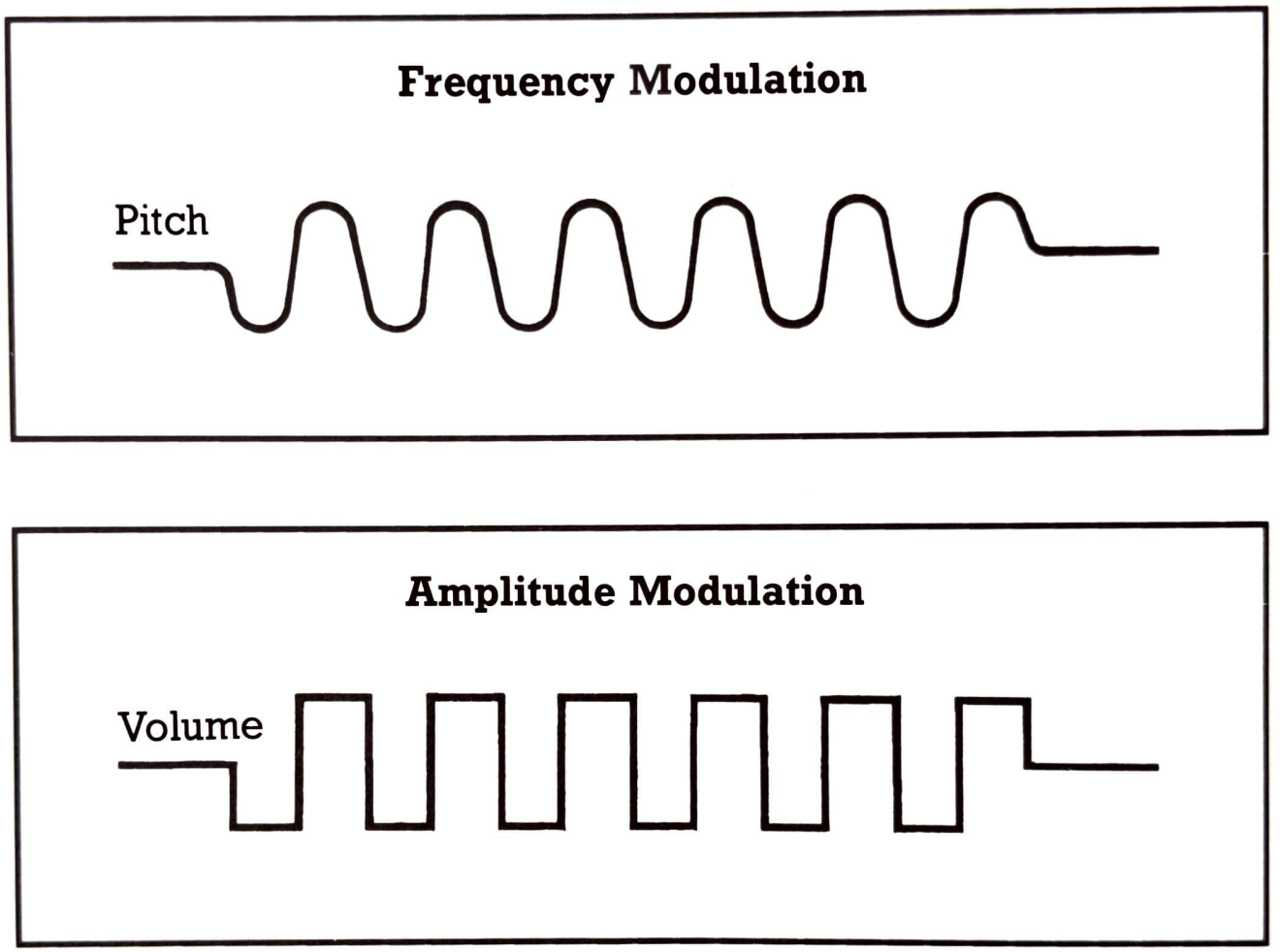
# 6.5.2 VIBRATO

VIBRATO is a very important sound characteristic, so you are likely to encounter this parameter frequently. Press the VIBRATO [VIB] button.



The first three rows allow you to select whether VIBRATO is enabled for each of the three TONES. If 1st, 2nd, and SUB are all set to 'OFF' there will be no vibrato at all. So, at this point, remember how many TONES you have used for your sound (1st, 2nd, SUB) and then decide which of them should be affected by vibrato.

The vibrato consists of two different components,




The names of the two components really explain their function:

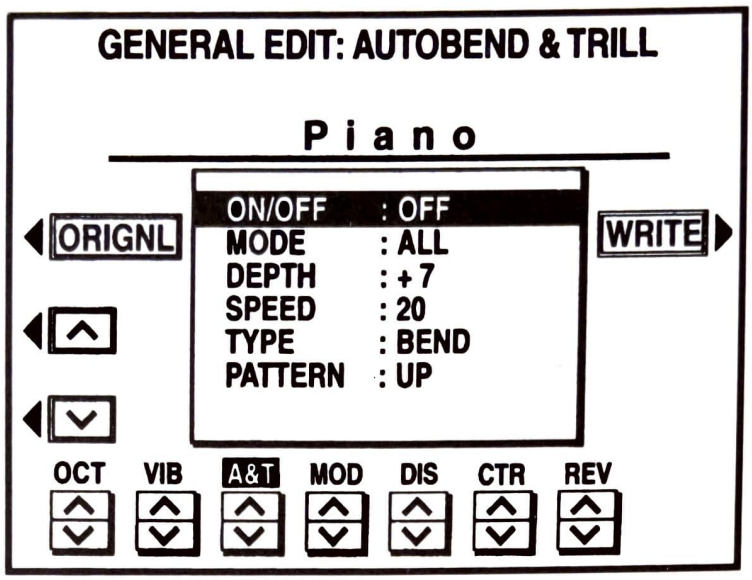
**PITCH MOD DEPTH** sets the depth of the variation in pitch (otherwise known as Frequency Modulation) This is perhaps what most people understand to be vibrato. The higher the number the wider the variation.

**VOLUME MOD DEPTH** sets the intensity of the volume variation (otherwise known as Amplitude Modulation). This would be recognised as the effect known as tremelo, however it is the combination of pitch and volume modulation which produces the most usable and realistic result. You can set the SPEED of the vibrato and also the DELAY between pressing the key and the vibrato starting.

# 6.5.3 AUTOBEND & TRILL

The AUTOBEND & TRILL function creates automatic trills or bend effects. The bend effects are especially interesting for certain synth sounds.

Press the [A&T] button.




The top row turns AUTOBEND & TRILL on, and gives you the option to select TOUCH, in which case AUTOBEND & TRILL only to affect the sound when a key is played very hard. (Especially useful for bend effects).

MODE allows you to decide which TONES are affected by AUTOBEND & TRILL.

| | |
|---|---|
| **1st** | *The effect appears only on the first TONE.* |
| **2nd** | *The effect appears only on the second TONE.* |
| **ALL** | *The effect appears on all TONES.* |
| **INVERSE** | *The effect appears on all TONES; but the effect is inverted on the second TONE.* |

With **DEPTH** you control how great the variation in pitch is for AUTOBEND & TRILL in it's various patterns.

**SPEED** controls how fast the AUTOBEND & TRILL pattern is.

**TYPE** allows you to select whether the effect is a BEND or a TRILL. BEND is an automatic pitch bend in various patterns and TRILL is a musical figure in various patterns (almost like a brief embellishment or melody).

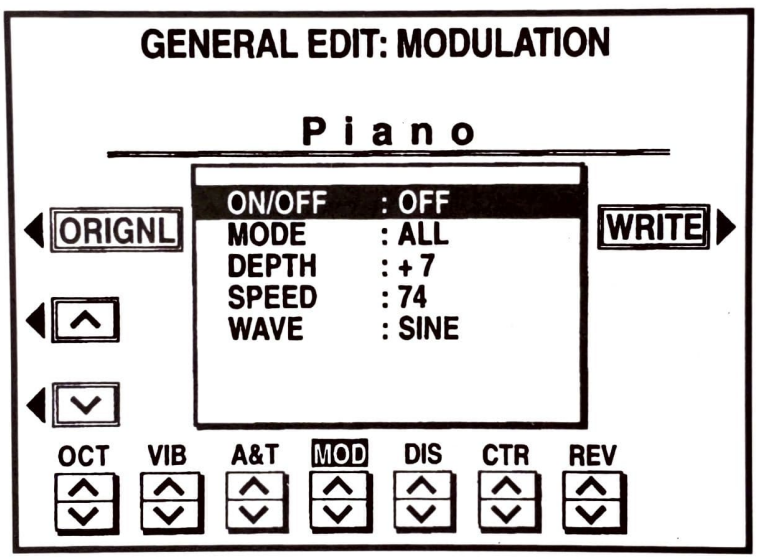
**PATTERN** you can now choose from 8 different patterns: four different bend patterns and four different trill patterns. On page 12 of the KN2000 REFERENCE GUIDE you will find a graphic display of these patterns which might help you in your selection, or just try them for yourself!

The most interesting way to use AUTOBEND & TRILL is probably to set 'TOUCH'. In this mode are you able to introduce the BEND or TRILL patterns at will (ie: through playing the keys harder).

## 6.5.4 MODULATION

The Modulation function is also a type of vibrato. In the MODULATION display you can add an additional constant modulation to your sound. This is especially interesting for the synth section.

Press the [MOD] button and the GENERAL EDIT page 'MODULATION' appears on the display.




Set the top **ON/OFF** row to ON with the TEMPO/PROGRAM wheel to switch modulation on.

Once again **MODE** allows you to select which of the TONES is affected.

| | |
|---|---|
| **1st** | ***Only the first TONE is modulated.*** |
| **2nd** | ***Only the second TONE is modulated.*** |
| **ALL** | ***All three TONES are modulated.*** |
| **INVERSE** | ***All three TONES are modulated; but the modulation for the second sound is inverted.*** |

**DEPTH** controls the intensity of the modulation. You can set a depth of greater than one octave.

**SPEED** allows you to set as before, the speed of the modulation.

**WAVE** lets you choose between four different waveforms, ie: four different forms of modulation:

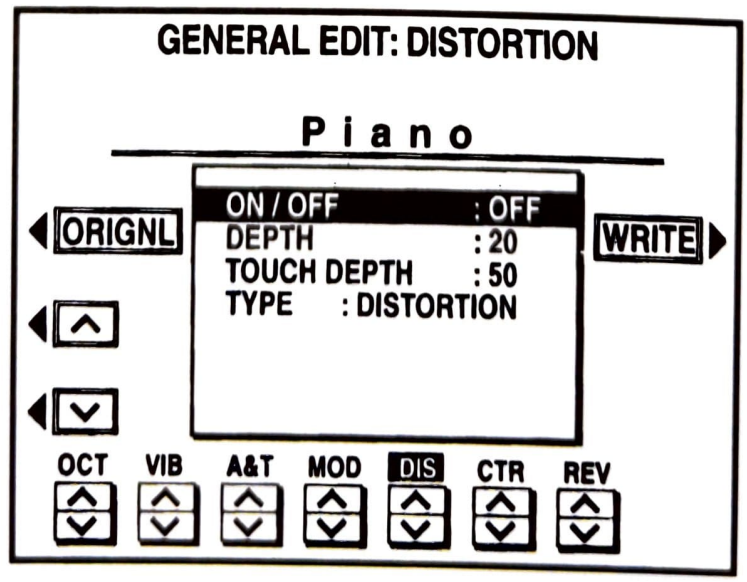
| | |
|---|---|
| **SINE** | *Sine wave* |
| **TRIANGLE** | *Triangle wave* |
| **SQUARE** | *Square wave* |
| **SAW** | *Saw tooth wave* |

This ability to add several different types of modulation to your sound is similar to that of the analogue synthesizers such as Moog or ARP. Therefore, you might find it interesting to use some of the classic synth waveforms (TONE EDIT: TONE) which benefit from such effects. If in the CONTROLLERS display (See: **6.5.6 Controllers**) you set WHEEL SELECT to MOD you can control all modulation settings made here through the modulation wheel (to the left of the keyboard).

## 6.5.5 DISTORTION

With this function you can change a sound by distorting it. Take a Rock Saxophone sound: with DISTORTION you can give it a typical rough playing edge.

Press the [DIS] switch to get into the GENERAL EDIT page DISTORTION.



**ON/OFF** turns the distortion effect on or off - so set ON here.

**DEPTH** again controls the intensity of the effect - if you set a '0' in the DEPTH row no distortion will be heard.

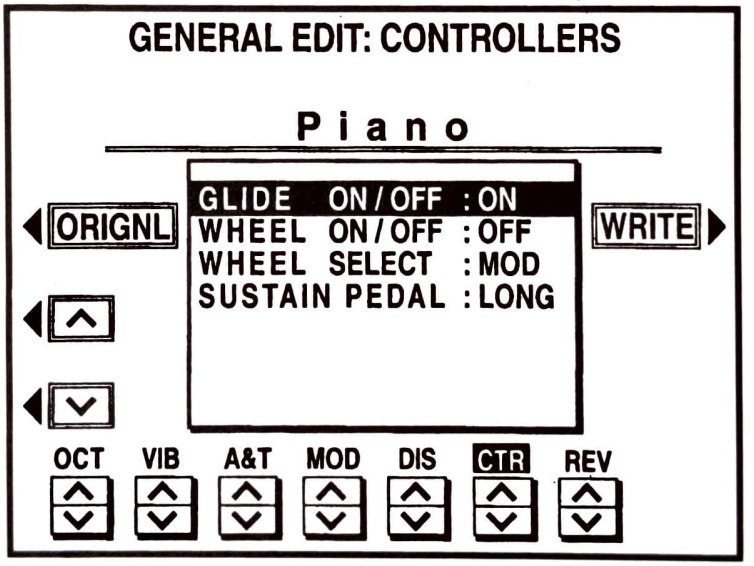
With **TOUCH DEPTH** you control the relation between distortion and touch dynamics. If you set a high value (max. 50) here the distortion will be heard only when the keys are played very hard. If you set '0' the distortion will always be heard, no matter how softly you touch the keys.

After **TYPE** you can choose between two different types of distortion. If you choose DISTORTION the effect will be heard over the whole duration of the tone. With GROWL the effect appears only at the beginning of a tone. This type is important for the saxophone sound mentioned above.

## 6.5.6 CONTROLLERS

The CONTROLLERS page deals mainly with assigning certain functions to the modulation wheel and to the sustain pedal.

Activate the [CTR] switch on the lower edge of the display to get to the GENERAL EDIT page CONTROLLERS.




**GLIDE ON/OFF** selects whether the glide function will work on your sound. For example, you would probably not want glide to work on a Piano type sound. Later if you combine two sounds, for example your edited Piano in RIGHT 1 and Jazz Guitar in RIGHT 2 the glide effect (from a Pedal or Pad) will only affect the Jazz Guitar.

**WHEEL ON/OFF** controls whether the modulation wheel has any influence at all on the modulation (or vibrato) you have set before.

**WHEEL SELECT** allows you to select whether the modulation wheel controls modulation (MOD) or vibrato (VIB). To make this work, WHEEL ON/OFF has to be set to 'ON'. If you control the modulation through the wheel then modulation will be at a maximum when the modulation wheel is totally drawn back. Only when the wheel is moved forward a bit can the modulation intensity be controlled through the wheel.

**SUSTAIN PEDAL** offers a choice of two sustain modes, LONG and HOLD: LONG sustain gives you normal sustain which is adjustable in length for each part of the keyboard in the SOUND SETTING page (See: **2.4.1 Sound Settings Functions**).

**HOLD** works in two different ways depending on the type of sound that you are using, but basically links the type of sustain that you get to the envelope characteristic of the sound.

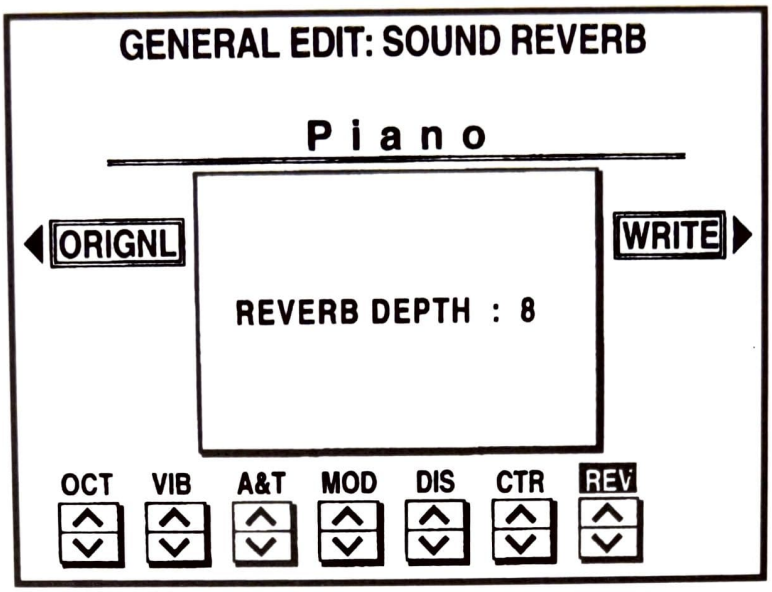
For example, a continuous sound such as Jazz Organ or Strings will hold for as long as you press the sustain pedal. Just play a note and while you are holding the key down press the sustain pedal. If you release the key the note will keep sounding until you release the pedal.

With a sound that decays like Piano or Electric Piano the HOLD function will make the sustain exactly the same length as the decay of the sound. So if you play and hold a note on a Piano sound until it dies away completely, or play and sustain a note with the pedal the decay time will be the same.

This is very important with a Piano sound because the decay time gets progressively shorter moving up the keyboard, as in a real Piano. So with the HOLD function this characteristic is duplicated when using the pedal. However, if you use HOLD you cannot adjust the sustain length in SOUND SETTING. If you want to adjust the sustain length of a Piano sound, edit the sound changing the sustain pedal setting from HOLD to LONG.

# 6.5.7 REVERB

Press the [REV] switch on the lower edge of the display to get to the REVERB page.




This control enables you to alter the amount of signal from this sound sent through the reverb circuit, so you can create an individual sound which has much greater reverb depth than other sounds, perhaps to highlight it for a solo, or create a sound with much less reverb depth so that the reverb could be increased in depth on other parts.

When finished editing your SOUND refer again to **6.2. Storing Sounds.**

# The Sequencer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# 7.0 The SEQUENCER

Nearly all modern keyboards have a device which enables you to record your performance and listen back to it, typically called a SEQUENCER.

The KN2000 sequencer has 16 tracks, and could be likened to a 16 track tape recorder. But the comparison becomes inappropriate when you think of the many editing possibilities offered by the KN2000 sequencer.

Working with the sequencer is at least as simple as working with a tape recorder - I'm sure you will agree after you have read the following chapter on EASY RECORD.

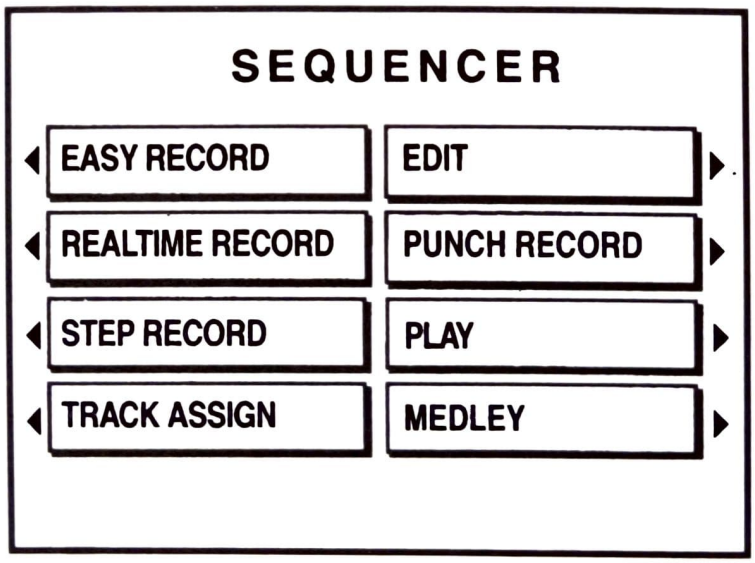
## 7.1.0 EASY RECORD

If you are playing a piece of music just on one sound (for example Piano) or using Auto Play Chord for the backing, EASY RECORD is the best choice to record your entire performance in one go.

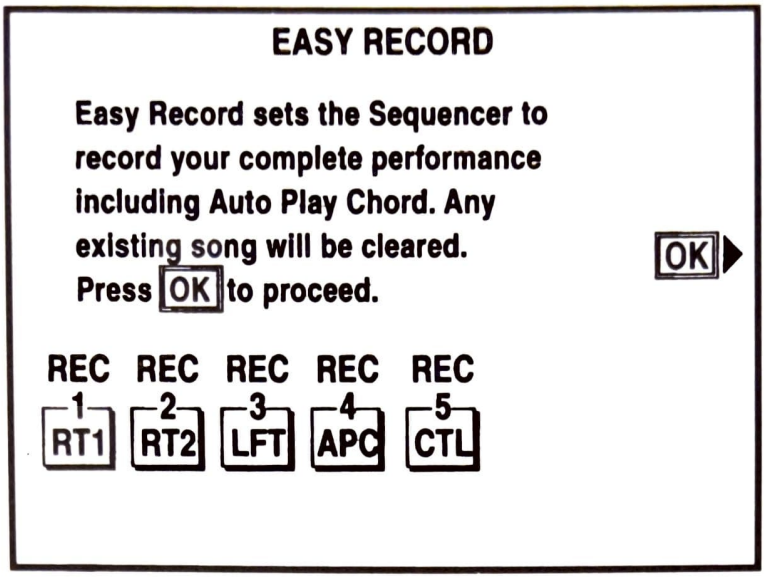
## 7.1.1 Using EASY RECORD

First of all set the keyboard up ready for your performance (you could use One Touch Play to do this for you)

Then press the SEQUENCER button to the right of the display to get into the SEQUENCER main menu.




Now the SEQUENCER main menu is on display with all its sub menus. Select EASY RECORD in the screen.


EASY RECORD
Easy Record sets the Sequencer to record your complete performance including Auto Play Chord. Any existing song will be cleared.
Press OK to proceed.
OK
REC 1 RT1
REC 2 RT2
REC 3 LFT
REC 4 APC
REC 5 CTL

The screen will explain to you that using EASY RECORD will erase any existing recording in the Sequencer, and will ask you to confirm by pressing OK. So press OK and you are ready to go!

It doesn't matter if you play with or without automatic accompaniment, with or without a split point - the Sequencer will now record everything.

To make sure nothing is left out the Sequencer has now automatically switched the most important tracks for a realtime recording.

**Track 1 [RT1]** *sounds from RIGHT1 are recorded.*

**Track 2 [RT2]** *sounds from RIGHT2 are recorded.*

**Track 3 [LFT]** *sounds from the LEFT section are recorded.*

**Track 4 [APC]** *the chords for the accompaniment are recorded.*

**Track 5 [CTL]** *all other settings you make are recorded.*

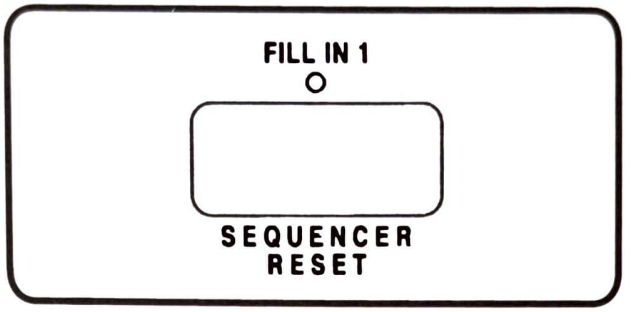
EASY RECORD records all APC modes. You may even switch from FINGERED to PIANIST mode while playing. Whatever you do - tempo changes, volume changes or switching on TECHNI CHORD - with EASY RECORD everything is recorded by the sequencer!

## HINT!

*Make your settings, such as sound choice, accompaniment choice, or tempo settings before recording with EASY RECORD.*

## 7.1.2 Ending recording and playing back

To end the recording when you have finished playing, the easiest way is to press the SEQUENCER menu button once more. After the display has asked you to save your recording on disk you can listen again to what you have played by pressing START/STOP. Press START/STOP again and the Sequencer will stop playing back, and if you press START/STOP once more will continue from where it stopped, not from the beginning. If you want it to start from the beginning again press SEQUENCER RESET (Fill-In 1).




When SEQUENCER RESET is pressed the sequencer always returns to the beginning.

Of course the recording made with EASY RECORD can be edited afterwards, and you can also add more tracks with REALTIME RECORD.

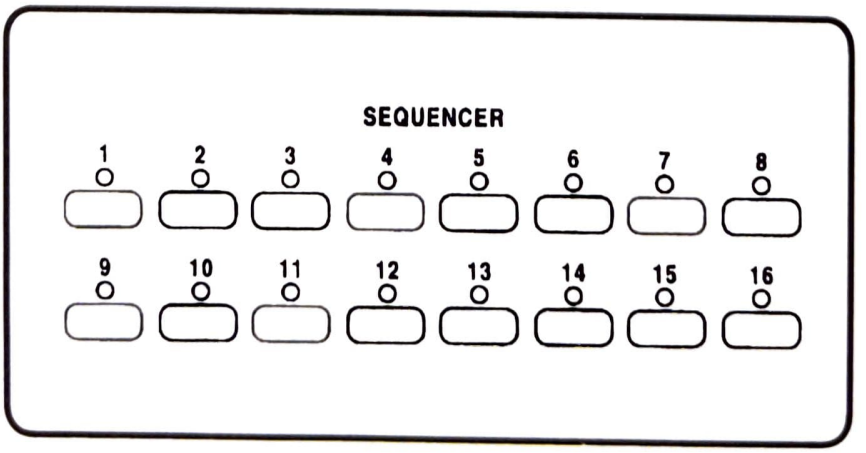
## 7.2.0 TRACK ASSIGN

Before trying a realtime recording you should first look at the assignments of the individual sequencer tracks. After all, the sequencer doesn't just record notes but also control data or the chords for the automatic accompaniment.

For this, the individual tracks first have to be told what to record. This process is called TRACK ASSIGN.

If the KN2000 has been initialized, the sequencer recording tracks will have already been assigned to certain functions.

1: RIGHT1
2: RIGHT2
3: LEFT
4: APC/CHORD
5: CONTROL
6: RHYTHM
7: DRUMS
8: PART4




9: PART5
10: PART6
11: PART7
12: PART8
13: PART9
14: PART10
15: PART11
16: PART12

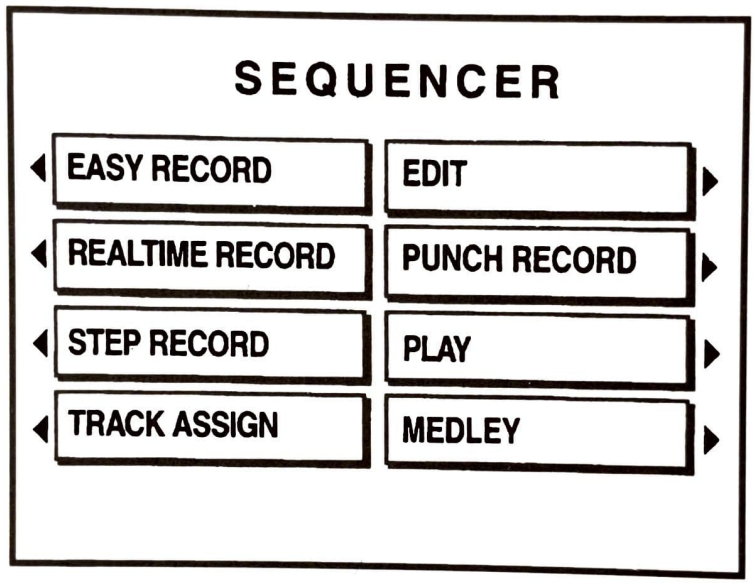
## 7.2.1 The TRACK ASSIGN System

In terms of sound the KN2000 has been divided into 16 parts, which means it can basically play 16 sounds at a time. These 16 sound parts are also found in the SOUND menu under SOUND SETTING.

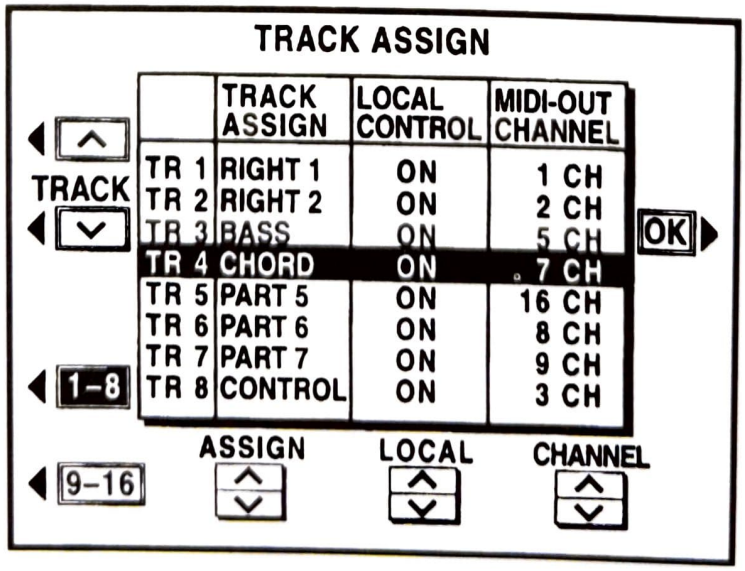
The KN2000's Sequencer can be used like a 16 Track tape recorder with each Track being assigned to one of the 16 sound parts (including Drums). However, there are several other Track Assignments to perform other useful functions on the KN2000.

## 7.2.2 TRACK ASSIGN options

You will find a button marked TRACK ASSIGN in the main Sequencer menu.




Select TRACK ASSIGN in the Sequencer main menu.



On this page you can assign a certain recording function to each track. At the moment you can see the first 8 tracks and their assignments. To see the other 8 tracks you have to press '9-16' below on the left-hand side of the screen, to return press '1-8'.

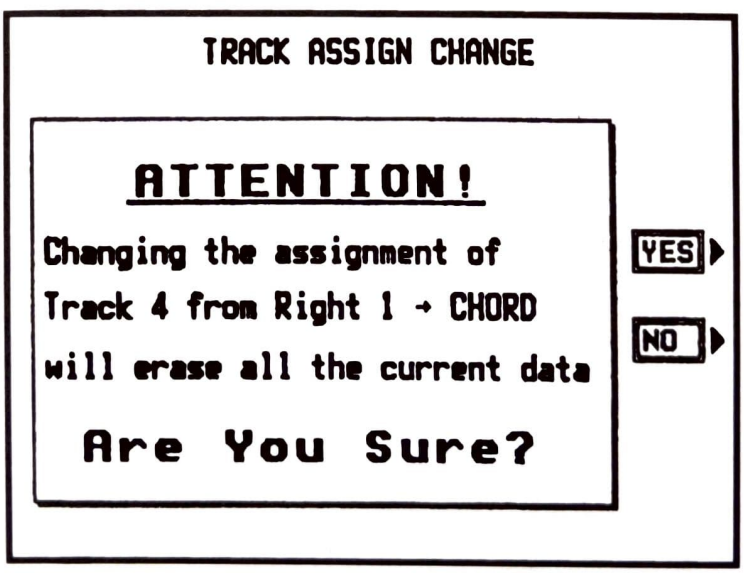
Now use the two Up/Down buttons on the upper left-hand edge of the display or the TEMPO/PROGRAM wheel to choose a track. In the first column you will see the track number, in the second column, under TRACK ASSIGN, the function already assigned.
The LOCAL CONTROL column allows you to decide if the KN2000's sounds will be played from this track and with MIDI-OUT CHANNEL you can set the track to send it's data out via Midi (on a specific Midi channel) to another instrument. So you can decide whether the track plays the KN2000, and external instrument or both.

To change the column settings use the three switches on the lower edge of the display as usual.

---

**If after a new assignment an [OK] appears on the right-hand edge of the display, then you must first confirm this change by pressing [OK] Otherwise the assignment will not be changed. This applies to CHORD, APC, DRUM, RHYTHM, and CONTROL.**
**If you change one of these assignments the track will be deleted. Therefore the following WARNING page appears:**

**ATTENTION!**

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It is not possible to assign CHORD to one track and at the same time to assign APC to another track, as both tracks would be doing the same thing. The only difference is that CHORD is for Step input and APC for realtime input.

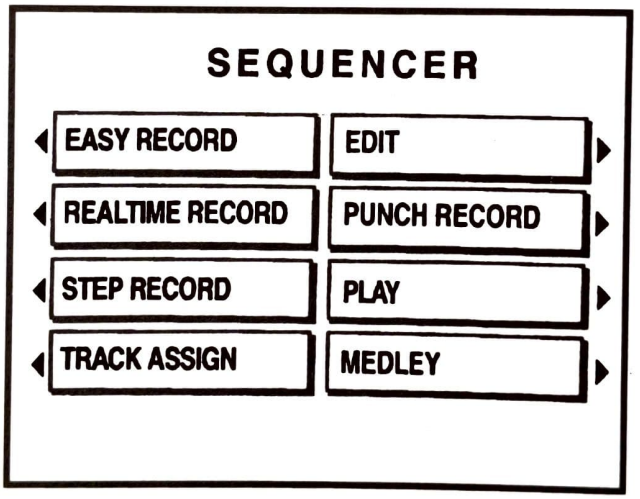
Make your TRACK ASSIGN settings before starting with the actual sequencer recording. That is to say, decide in advance which sequencer track is to record what. Thereby avoiding unnecessary complications during recording.

## 7.3.0 REALTIME RECORD

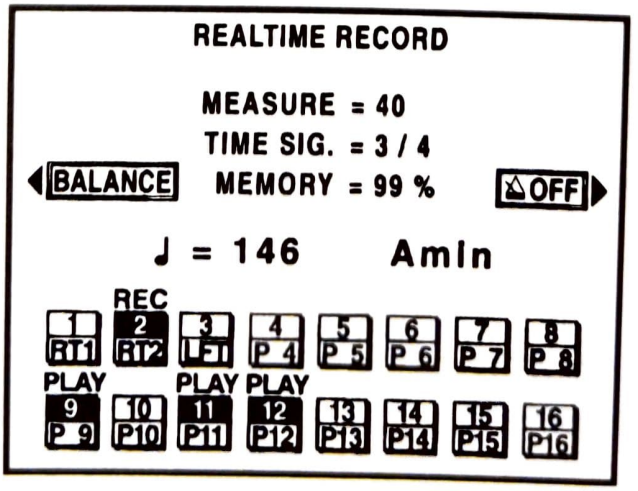
The sequencer can be used in two different ways: for Step recording or for Realtime recording. Realtime recording is probably the easier mode as it is similar to using a tape recorder. Also, a realtime recording will always sound more 'alive' then a Step recording.

## 7.3.1 Display and Basic Operation

First you open the sequencer main menu.

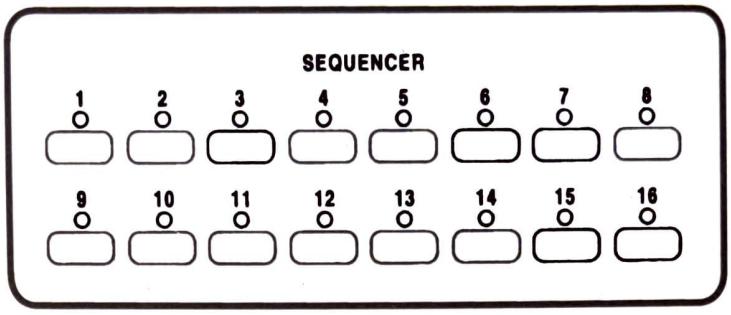



Now select REALTIME RECORD on the left-hand edge.



The first thing you will note in this display are the 16 recording tracks on the lower edge of the display. Under each track number you will also see (abbreviated) the assignments of the different recording sections. At this stage, please pay more attention to the display on your keyboard than to the display graphics in this book.

Now the track buttons on your keyboard are flashing.




The Track buttons are flashing to show you that they are ready for recording, so press the track button on which you want to record. As soon as a track button is pressed it will start flashing slowly, and on the display the track will be highlighted in white and labelled [REC].

## ATTENTION!

**When the keyboard has just been initialized track 6 (RHY) cannot be activated for a realtime recording as it is a STEP track. It must either be left out or be re-defined through TRACK ASSIGN. In STEP RECORD mode the track assignment RHY is used to set rhythm changes.**

In the upper part of the display you will find the measure display **(MEASURE=)** which indicates the measure you are presently in.

Under this there is the **TIME SIG.=** display showing you the time in which you are presently recording (3/4 or 4/4). The time signature is taken from the rhythm which is currently selected, so to switch from 4/4 to 3/4 just select a Waltz in the RHYTHM GROUP. To return to 4/4 select any 4/4 pattern.

The **MEMORY=** display shows you the remaining storage capacity. The more you have recorded, the less storage room will be available, and the smaller the value.

## 7.3.2 Metronome

On the right-hand edge of the display there is the Metronome ON/OFF switch. The metronome is especially helpful if you are recording without rhythm. When it is switched ON it will give you a pre-count of 2 measures before recording is started, so if you turn the metronome on the MEASURE setting will show -2. The sound of the metronome itself will of course not be recorded.

## 7.3.3 Balance & Tempo

By pressing the BALANCE button on the left-hand edge of the display the volume settings for the individual tracks will be displayed. The first two pages deal with track balance and work like a mixing desk. For example, balance for Track 1 will alter the volume of whichever part is assigned to Track 1. As usual these can be changed with the switches on the lower edge of the display - even during recording! After a while the BALANCE display returns to the REALTIME RECORD page, but you can hold it as always with DISPLAY HOLD.

For the tempo settings use the TEMPO/PROGRAM wheel as usual. The tempo chosen is indicated in the middle of the display.

## 7.3.4 Ending Recording

To end the recording just press the SEQUENCER menu button again. The display will return to the main page and you can listen to your recording in the Sequencer by pressing START/STOP. This is all there is to say on the basic operation of the sequencer. But now to some practical uses.

## 7.4.0 Practical Uses of the SEQUENCER

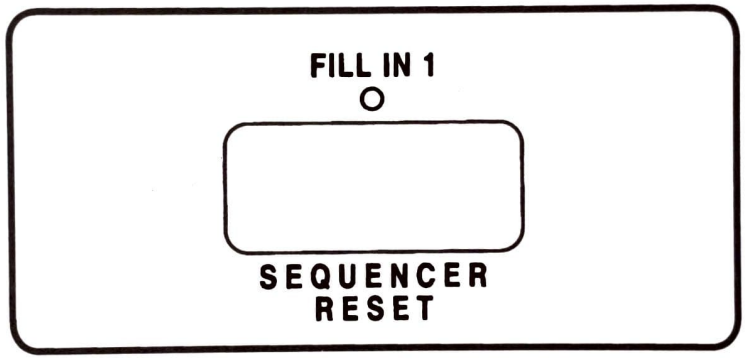
Suppose you have already made a realtime recording with EASY RECORD for which you have also recorded the automatic accompaniment. The accompaniment was recorded on track 4 (APC). Only the chords that you played are stored here, the backing is provided by Auto Play Chord, so you can't alter the actual patterns via the Sequencer, however you can re-record the APC track if you want to.

## 7.4.1 Recording Accompaniment

Sometimes it is much easier to record the accompaniment first on track 4 and then add the melody. To do this, select the desired rhythm, set the tempo, then press the SEQUENCER menu button, select REALTIME RECORD in the screen and then press track 4 (APC). If you want to use the INTRO, FILL-INS and ENDING you also have to switch on track 5 (CTL) - if not, these are not recorded.

Select SYNCRO/BREAK first and the recording will start directly with the first chord you play. Now record the desired chord sequence in realtime as if you were recording the actual piece with the melody. Your free right hand can be used to activate FILL-INs or to select the VARIATION pattern, or indeed to change to another rhythm. When you have finished press the SEQUENCER menu button again to end the recording.

To check what you have recorded press the START/STOP button. If you stop the play-back and want the sequencer to start again from the beginning, press the SEQUENCER RESET button (FILL IN1).




## 7.4.2 Adding the melody part

Press the Sequencer menu button once more, and select REALTIME RECORD and then press the Track 1 button.

Now you can record a melody part to go with the accompaniment you have already recorded. First set the sound with which you want to play. To do this press one of the SOUND GROUP buttons in the normal way. When the sound has been set the display will return to the REALTIME RECORD page.

Track 1 (RIGHT1) will now be marked in white on the display and labelled [REC]. If you want to play with two layered sounds (Eg: RIGHT1+2), then track 2 (RIGHT2) must also be called up. To start recording press START/STOP.

Sound changes are also recorded, as are DIGITAL EFFECT or DSP on or off.

When you have finished adding your melody, press the SEQUENCER menu button again to end the recording. To play back your opus' you just have to press START/STOP.

## 7.4.3 Recording additional parts

Maybe your piece still lacks something - a complete String line or Horn counter melody? You can easily add further parts to your recording.

Select REALTIME record again and the tracks on which you have already recorded will be marked white on the display and will be labelled [PLAY]. Now look for a free track that contains a part number (Eg: P4-P5-P6...) There are plenty of tracks left which you can use for additional parts. (If the KN2000 still has it's initial Track assignments try using Track 8 (assigned to Part 4)).

Select one of these tracks with the track buttons and set the sound with which you want to play. But don't play on the keyboard yet, as these notes could be recorded.

It is a good idea at this stage to check the volume of the selected sound as a counter melody is not usually as loud as the melody part. To alter the volume settings for your new part select BALANCE and the track numbers TR1, TR2, TR3... appear. You can now adjust the volume for your track. When you have finished the display will automatically return to the REALTIME RECORD page.

Press START now to start recording.

When you have finished playing press the SEQUENCER menu button again to end the recording.

## 7.4.4 Recording From External Sequencers

The REALTIME RECORD method is also great for recording sequences from an external sequencer, for example if you want to transfer a song created on a computer sequencer programme such as NOTATOR or CUBASE to the KN2000. Using this procedure it is useful to set all of the sound changes (Programme Changes) on the computer.

All tracks of the sequencer have to be assigned to a normal part (RIGHT1, RIGHT2, LEFT, PARTS 4 - 15 and DRUMS on track 16) Select REALTIME

record and press all of the Sequencer Track buttons, so they are all flashing slowly. Start the computer playing and the KN2000 will record all of the incoming notes. If the KN2000's rhythm starts either disable REALTIME MESSAGES in the MIDI menu or set an empty Composer pattern, and try again.

## 7.5.0 EDIT

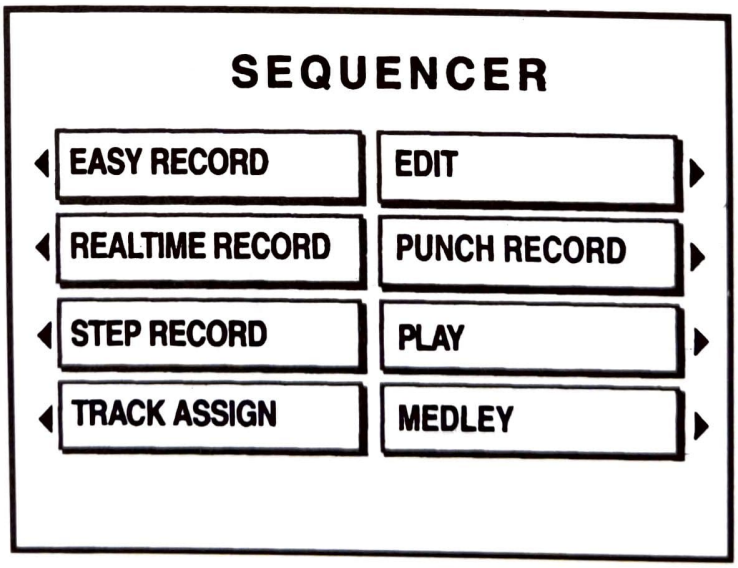
If you make a mistake you don't have to re-record the whole song ! After all, who is perfect enough to perform a whole song from beginning to end without a single mistake? The sequencer EDIT section offers you many ways to correct mistakes afterwards, to delete a track or to correct just one note in step mode. In addition to this you have the QUANTIZE function and the possibility to copy entire parts.

Before you start editing you should first save your song on disk. During editing you might end up deleting something that you didn't want to delete at all, if you have saved your song on disk you can always re-load it and start to edit again.

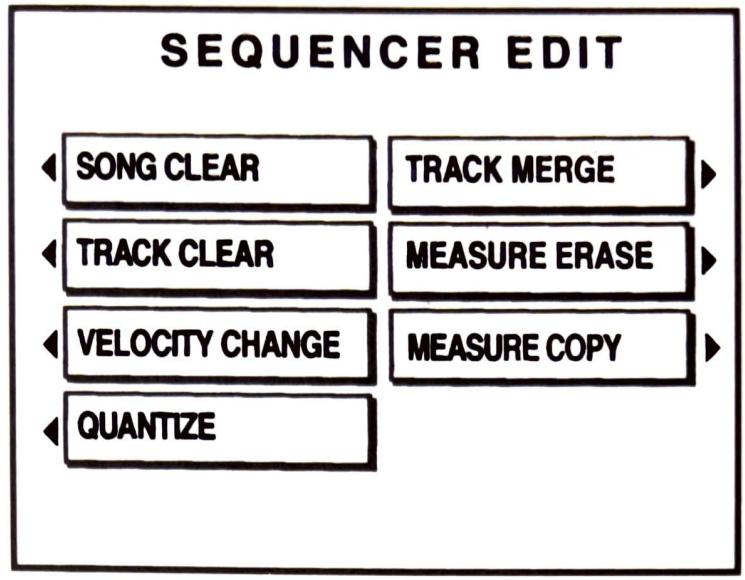
## 7.5.1 SONG CLEAR

First the most brutal way of correcting mistakes! SONG CLEAR is a function which will delete all the data on all tracks in the sequencer at a single stroke.

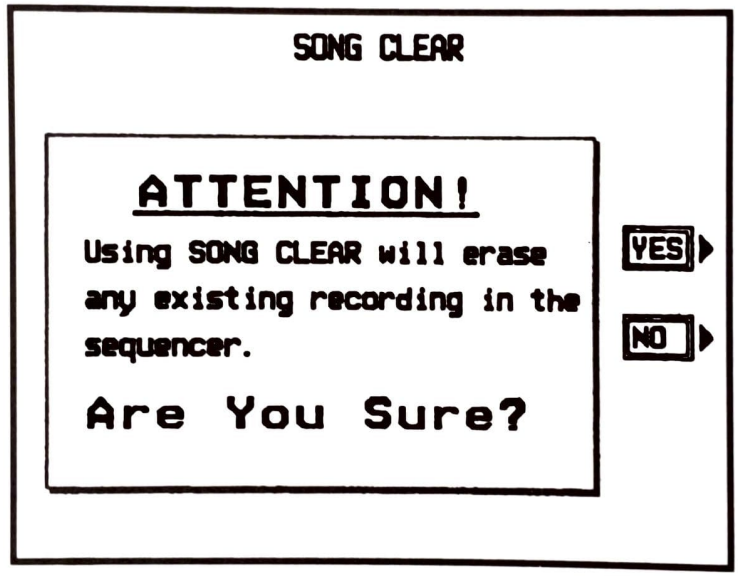
First select the sequencer main menu.




Then select EDIT




In this sub-menu you will find various editing functions, however to delete the entire song in the sequencer press SONG CLEAR.



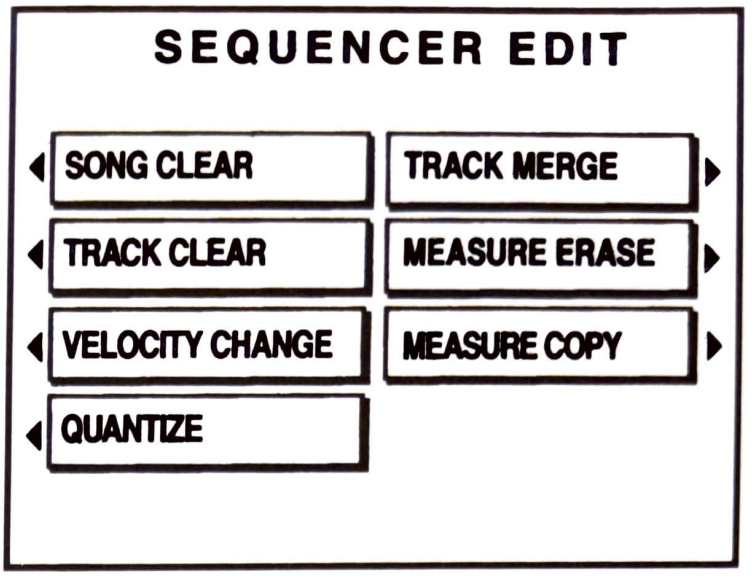

This display gives you a warning so you don't accidentally delete the song. If you select [NO] at this point you can cancel the deleting process. If you press [YES] now your song will be irreversibly deleted from the sequencer!

The big advantage of SONG CLEAR over initializing the Sequencer is that this way the track assignments will stay the same.

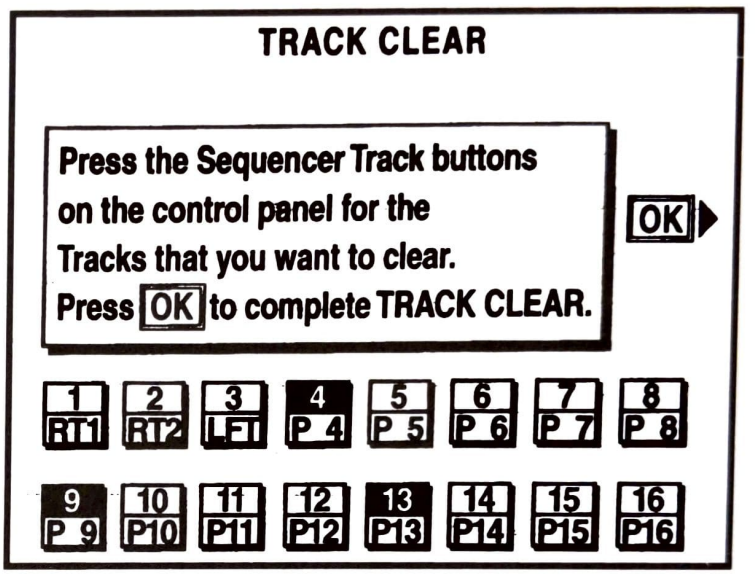
## 7.5.2 TRACK CLEAR

As the name says, this function deletes individual tracks from the sequencer.

Open the SEQUENCER EDIT menu again,

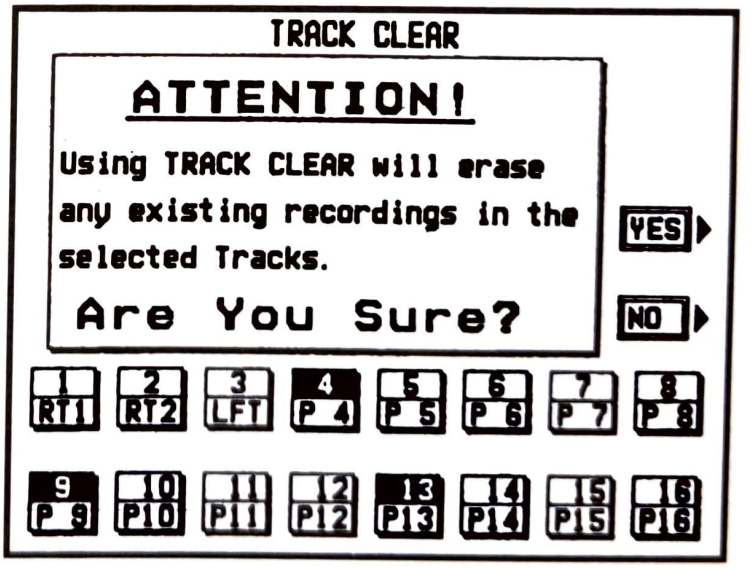



and select TRACK CLEAR.




You will now be asked to select the track(s) to be deleted with the track button(s). To confirm this, the selected tracks will be marked white on the display.

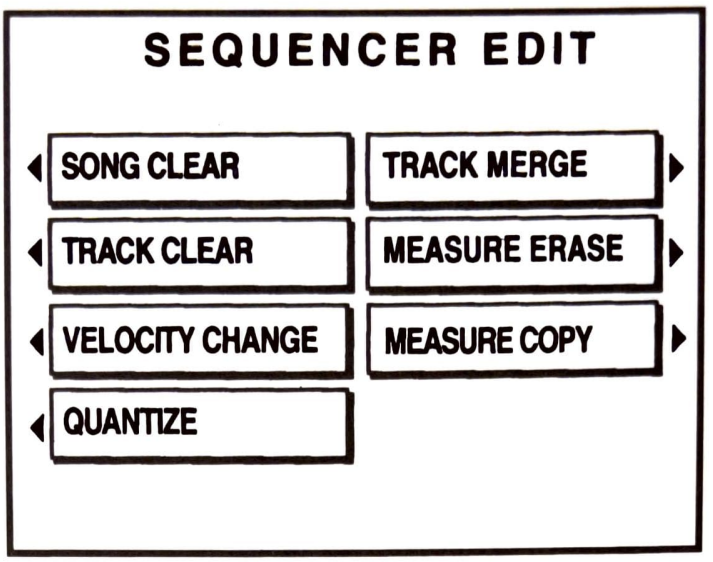
Now press [OK].



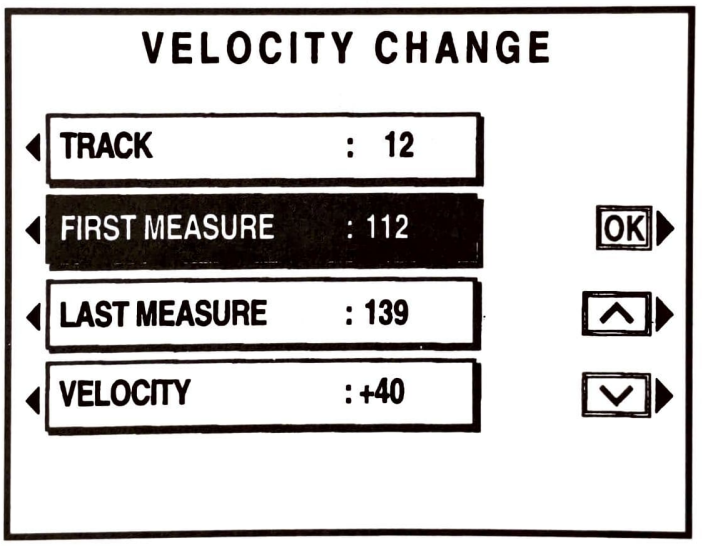

Here too you are given a warning to avoid deleting something unintentionally, Press [NO] to cancel the deletion or "YES? to complete the process.

# 7.5.3 VELOCITY CHANGE

Velocity Change allows you to alter the velocity of the notes played on a specific track, or part of a specific track. Select SEQUENCER EDIT




and then select VELOCITY CHANGE.




If you have played a part of your song too loud or too soft you can select this part and raise or lower velocity for it on this page.

First select the **TRACK** on which the velocity change is to be made, and then set the range on that track that you want to be altered. For example you may want the notes from the beginning of measure 10 to the end of measure 16 to be louder or softer. In this case set **FIRST MEASURE** to 10 and **LAST MEASURE** to 16.

**VELOCITY** controls allow you to set, by how much, the velocity should increase or decrease: to increase set a plus value, to decrease set a minus value. Settings can also be made with the TEMPO/PROGRAM wheel.

You may wonder why you should change the velocity of a track rather than just changing the balance level. But remember that the KN2000's sounds alter with velocity, so the sounds are not just louder or softer, but brighter or mellower, and of course certain elements such as attack also alter with velocity. Also you have an easy method of altering the level for just part of a track.

When changing the velocity you should be very careful as you might easily create volume jumps between your edited section and the rest of the track (unless you are changing the whole track). It's a good idea just to try out very small velocity values at first and to approach the desired result in steps rather than in one go.

However, you can always reverse the change by setting the opposite velocity value for the same part of a track.

## 7.5.4 QUANTIZE

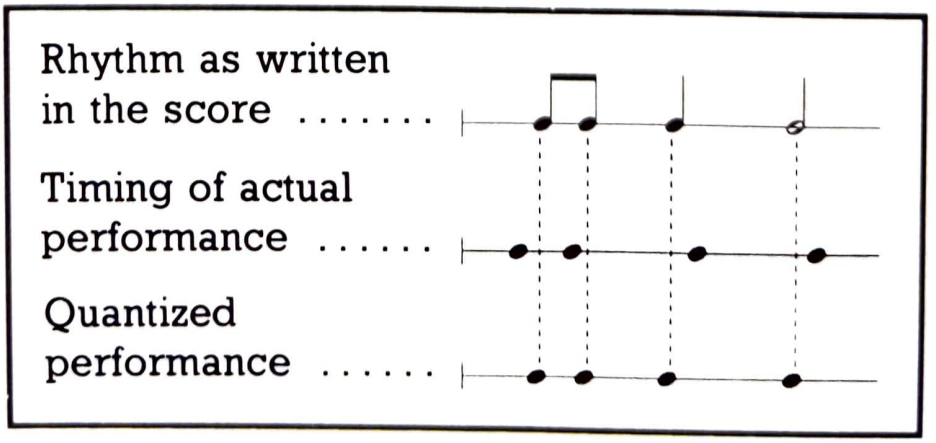
If you have already worked with the KN2000 COMPOSER you will know what QUANTIZE does and when you should use it.

## 7.5.5 What does QUANTIZE mean?

QUANTIZE allows you to set a note value (a timing value) which effectively divides each measure into steps. The number of steps is determined by the note value, so a sixteenth note QUANTIZE value will divide each measure into sixteen steps. When you quantize all of the notes that you have played are dragged onto the nearest step, thus automatically correcting (or tidying up!) the timing of your recording. As a useful rule of thumb:-

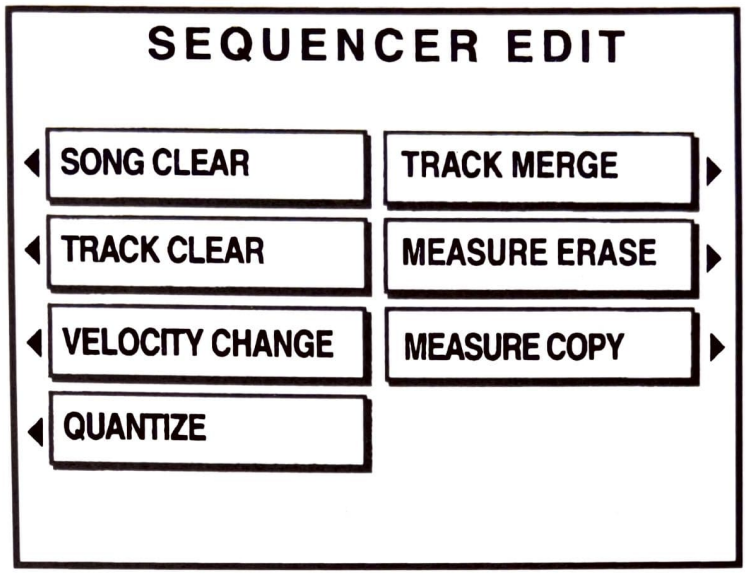
Always set the QUANTIZE value to the smallest note length that you are going to play.

QUANTIZE is especially useful with very rhythmical tracks like a drum track.

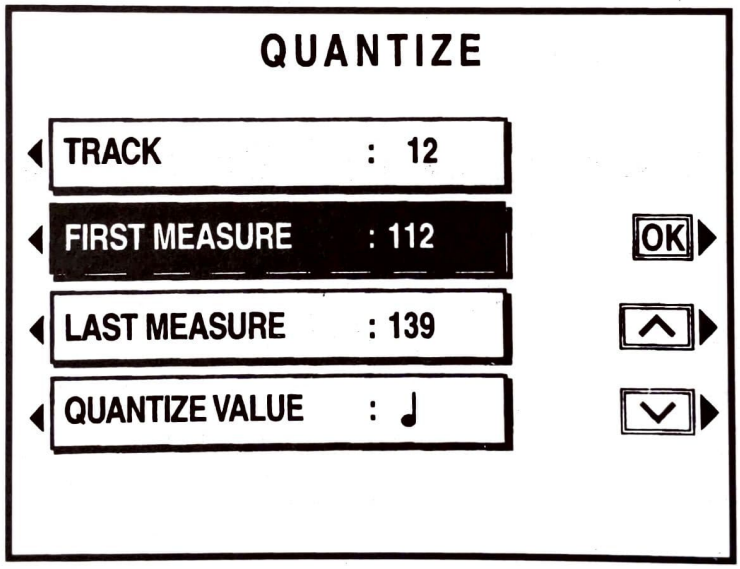


# 7.5.6 QUANTIZE Display and Operation

As always, first select the SEQUENCER EDIT menu




Then select QUANTIZE




Just as with velocity change you can select a specific track and a specific range of measures on that track to be Quantized.

First select the **TRACK** (for example TRACK=1) and then set the range on that track that you want to be Quantized. For example you may want the timing of the notes from the beginning of measure 10 to the end of measure 16 to be corrected. In this case set **FIRST MEASURE** to 10 and **LAST MEASURE** to 16.

**QUANTIZE VALUE** lets you set the note value to which all of the notes will be corrected. The initial setting for Quantize is sixteenth notes, and with almost all 'straight' recordings you can leave this setting. If your piece has a swing feel you should set the Quantize value to eighth note triplets.

As a rule of thumb, set the Quantize value to the same as the smallest note value that you are using. Also take care if your performance has a triplet figure somewhere in the middle of straight notes, as Quantize set to sixteenth notes (for example) will destroy the triplet!

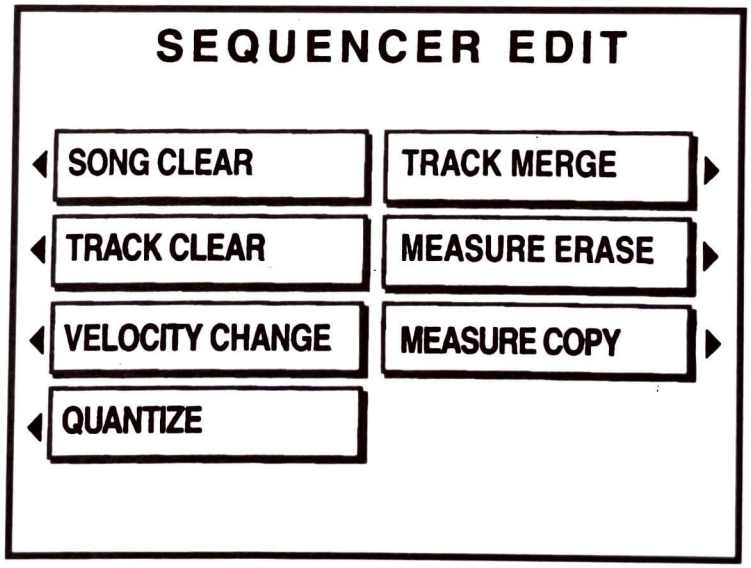
Also, be careful when quantizing melody parts as they might end up sounding less live and too exact and sterile.

Press [OK] to complete the QUANTIZE procedure.

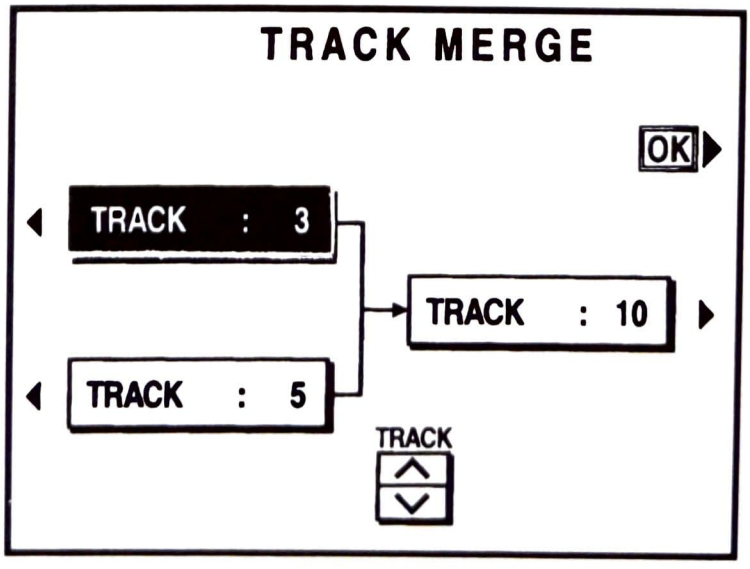
## 7.5.7 TRACK MERGE

With certain more challenging parts it may sometimes be useful to record the whole part as two separate tracks and then merge them together when you are finished. You might do this for example with a left hand and right hand Piano part.

To make one track out of these two tracks you use TRACK MERGE. This function will mix two tracks together to form one track. To get to the TRACK MERGE page you first have to select the SEQUENCER EDIT menu.




Now select TRACK MERGE.



The TRACK MERGE page is actually structured very logically because of it's graphics. At first glance you will see that from two tracks (in this case TRACKS 3+5) one TRACK will be created. In the two fields on the left enter the tracks to be merged, and in the field on the right the destination track. To set the tracks use the TRACK switch on the lower edge of the display.

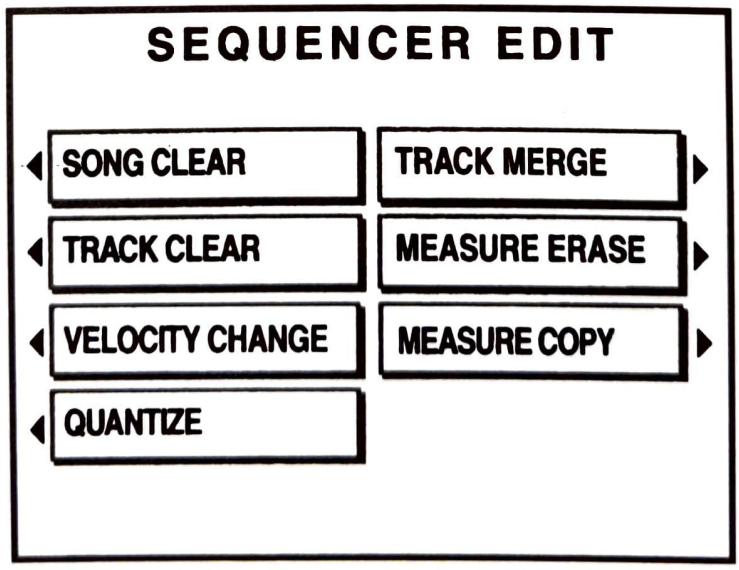
The destination track may also be one of the tracks to be mixed so you don't have to create a third track from two original ones (as in the graphics on the preceeding page). Merge only tracks that have been played with the same sound !! If two tracks that originally had different sounds are merged on one track the sequencer will always take the sound of the destination track. CONTROL, RHYTHM, and CHORD tracks cannot be combined with TRACK MERGE - this wouldn't make much sense anyway!

After setting the tracks to be merged and the destination track confirm by pressing [OK]. Before merging tracks please note that you will not be able to split the merged tracks again afterwards.

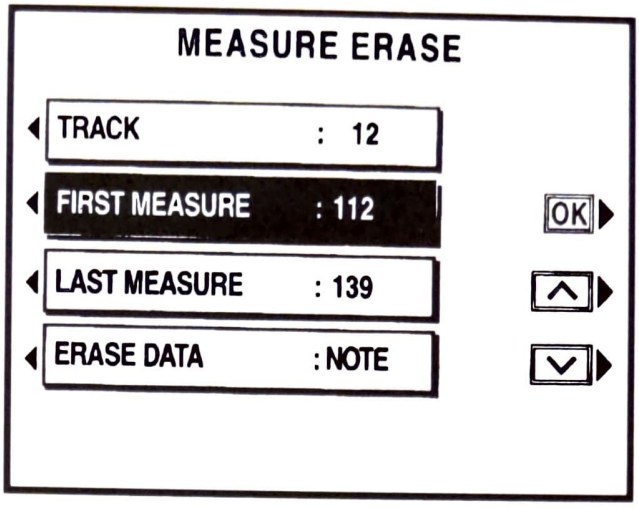
## 7.5.8 MEASURE ERASE

Here's another function for removing sequencer data. MEASURE ERASE allows you to erase the data in a set range giving you a choice of erasing ALL data, just the NOTE data or just the CONTROL data. For example, if you wanted to erase the pitch bend from a particular track (or part of a track) you could use MEASURE ERASE to do it. This is not a delete function, if you erase several measures they will be left in place but the selected data will be cleared from them, the length of the song remains unchanged.

Select the SEQUENCER EDIT menu.




Then select MEASURE ERASE.




First select the **TRACK** (for example TRACK=1) and then set the range on that track that you want to be erased. For example you may want to erase the notes from the beginning of measure 10 to the end of measure 16. In this case set **FIRST MEASURE** to 10 and **LAST MEASURE** to 16.

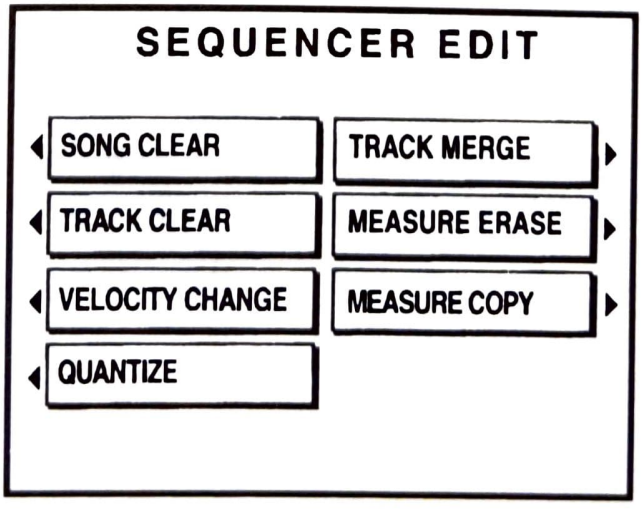
With MEASURE ERASE you can also set TRACK to ALL, which means that the erase process will be carried out on all tracks simultaneously. Finally MEASURE ERASE asks you to set the **ERASE DATA** (as previously mentioned) to ALL, NOTE or CONTROL.

To complete the process press [OK]. Again, the "ARE YOU SURE" display appears, enabling you to interrupt the process with [NO].

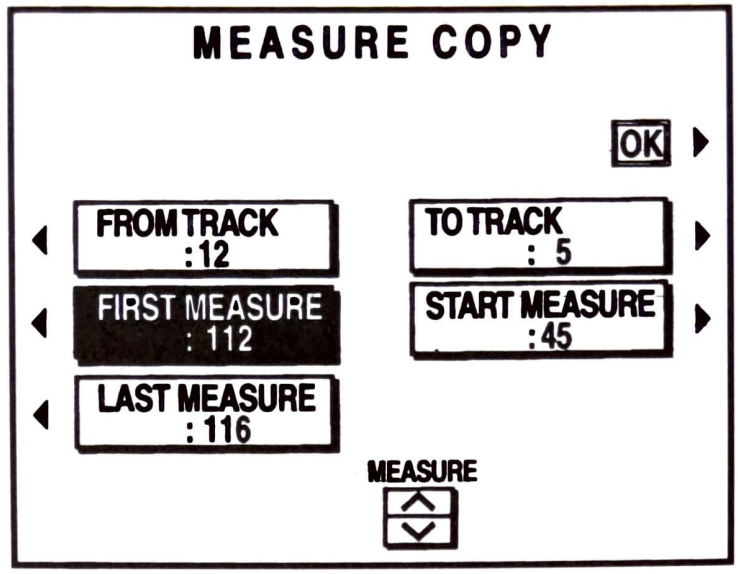
## 7.5.9 MEASURE COPY

Let's look at another useful function which can save you a lot of unnecessary work: MEASURE COPY. In almost every song there are repeated parts such as the verse or the chorus. By using MEASURE COPY you would only have to record one verse or chorus, as you can use MEASURE COPY to repeat the part as many times as you like.

To select MEASURE COPY first (as always) select SEQUENCER EDIT.



Now select MEASURE COPY.




Like the previous edit functions MEASURE COPY is also a "question and answer" display. It will ask you "from where" and " to where", and you want to copy. To enter the measure numbers use either the **MEASURE** switch at the lower edge of the display or, more simply the TEMPO/PROGRAM wheel.

On the left side of the display there are three boxes concerned with selecting the data that you are going to copy, and on the right side of the display two boxes concerned with to where you are going to copy the data.

Set the track from which you want to copy in the **FROM TRACK** box on the left of the display. This can be any of the sixteen tracks, or ALL sixteen tracks, enabling you to record eight measures (for example) on all sixteen tracks and then repeat them all with one copy procedure.

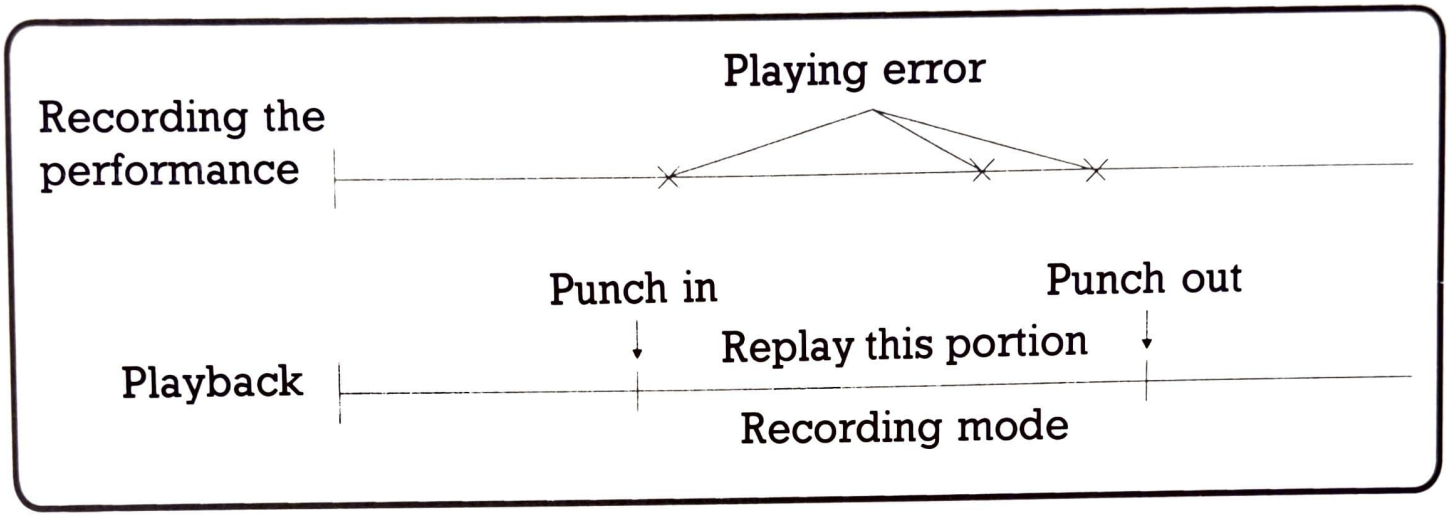
With **FIRST MEASURE** and **LAST MEASURE** you set the section to be copied. Set the first measure of the section to be copied in the FIRST MEASURE box and the last measure of the section to be copied in the LAST MEASURE box.

Set the track to which you want to copy in the **TO TRACK** box and in the **START MEASURE** box set the bar where the copied part should begin. If you selected ALL in the FROM TRACK box ALL will automatically be selected in the TO TRACK box.

To complete the copying process press [OK]. When the "ARE YOU SURE" display appears you can abort the copying process by pressing [NO], or confirm it by pressing [YES].

# 7.6.0 PUNCH RECORD: description

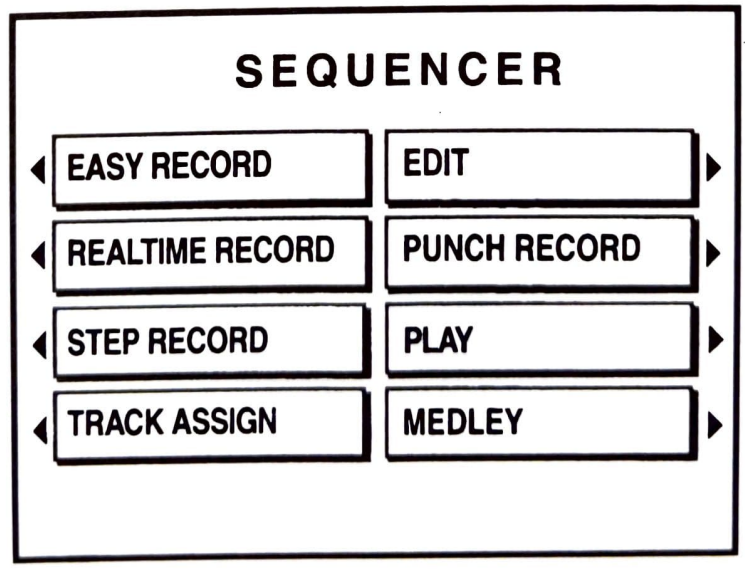
The PUNCH RECORD function is ideal for correcting mistakes in a song without having to re-record the whole track. With PUNCH RECORD you can re-record at a certain point and replace any mistakes. This function is just like punching in and out on a multi track tape recorder. Just play the track and at the point that you want to replace press punch in, and play the new notes. When you get to the end of the part that you want to replace press punch out.



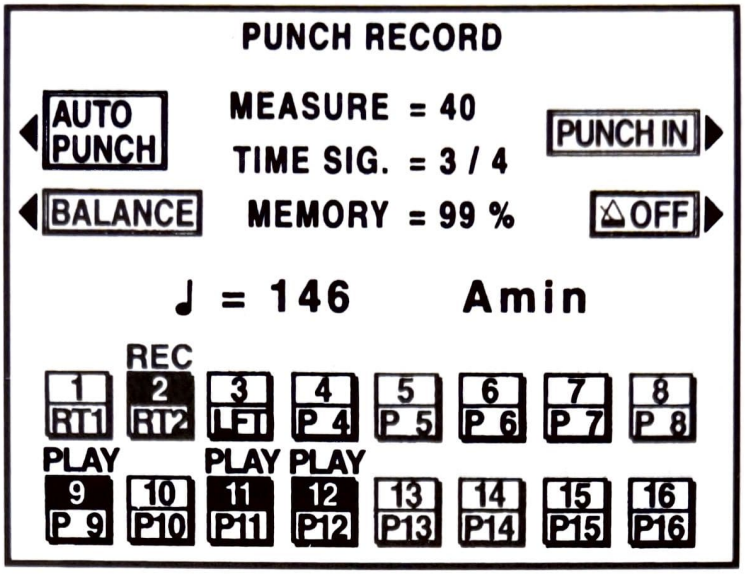

# 7.6.1 Display and Functions

For this sort of post-editing the KN2000 offers you two different modes: PUNCH RECORD and AUTO PUNCH.

Let's look at PUNCH RECORD first. Return to the SEQUENCER main menu




and select PUNCH RECORD.




The PUNCH RECORD page looks almost like the REALTIME RECORD page. Only the two switches on the left-hand and on the right-hand edge of the display are different.

In the lower section of the display you find the individual recording tracks again with those tracks which you have already used for recording marked in white and labelled "PLAY". First you will have to activate the track on which you want to punch record. To do this use the sequencer track buttons (now flashing) as usual. The track chosen is now labelled REC on the display.

## 7.6.2 Starting Recording with PUNCH RECORD

Now start the sequencer with the START/STOP button. You will hear your song as in a normal play-back. When you come to the part that you want to replace press the **PUNCH IN** button on the right-hand edge of the display. At this moment the "REC" track is muted and you can start playing your new part. The previous recording in this section will be replaced by your new part. (When you pressed the PUNCH IN button it changed to being the PUNCH OUT button).

When you have finished your new input press the **PUNCH OUT** button. When you press PUNCH OUT you complete the process and any notes that were previously recorded after this point will be retained. The sooner you press PUNCH OUT the cleaner the transition to the previous recording will be!! Please note also that you must press PUNCH OUT to complete the procedure, if you don't the new notes will not be recorded, and you will be shown an error message.

You can assign one of the MANUAL PERCUSSION pads to PUNCH, or even a footswitch, making it much easier for you to use the function without taking your hands off the keyboard. (See **2.7.2 Setting the PADS for other functions**).

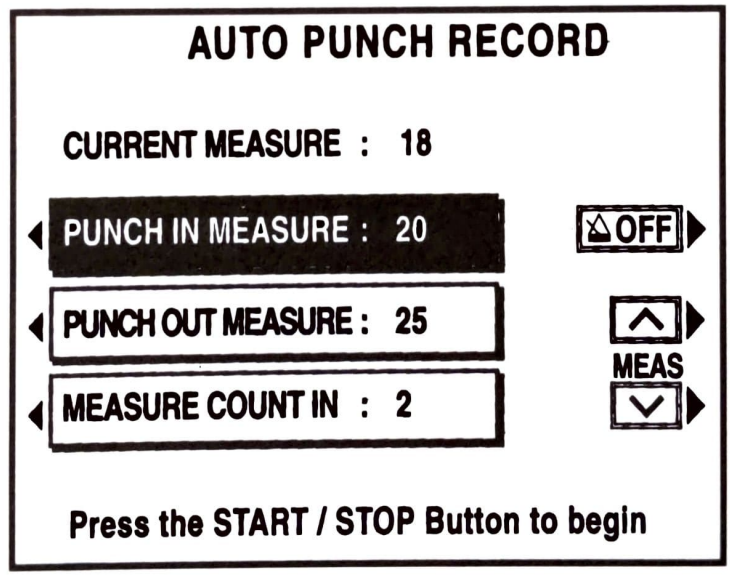
With this PUNCH RECORD mode you have had to listen to the entire song again and make sure not to miss the punch in point, however there is a way to select part of the song without having to listen through to the whole song.

## 7.6.3 AUTO PUNCH: description

AUTO PUNCH allows you to pre-set the punch in and punch out points and to start the play-back just a few bars before the punch in point, rather than having to listen to the whole song.

Select PUNCH RECORD as previously, and activate the track to be corrected with the track buttons. The selected track will be labelled REC on the display.

Now select AUTO PUNCH on the left-hand edge of the display. The display will now change to the following page.


AUTO PUNCH RECORD
CURRENT MEASURE : 18
PUNCH IN MEASURE : 20
OFF
PUNCH OUT MEASURE : 25
MEAS
MEASURE COUNT IN : 2
Press the START / STOP Button to begin

## 7.6.4 AUTO PUNCH Switches

There are three boxes in the screen which allow you to pre-set your punch in and punch out points: In **PUNCH IN MEASURE** set the measure number at which you want your new recording to start, and in **PUNCH OUT MEASURE** the measure where you want it to stop.

**MEASURE COUNT IN** allows you to set the sequencer to start from several measures before your punch in point, so that you can get ready to play. You don't have to set a value here, the recording can start directly from the punch in point, however this feature is a great help with getting into the feel of the track. If you set a value here you will notice the **CURRENT MEASURE** at the top of the screen showing you where the song is starting from, and when you press START you will see CURRENT MEASURE count towards the PUNCH IN measure, reminding you of when to play your new part.

Make all your settings either with the two MEAS switches or with the TEMPO/PROGRAM wheel.

## 7.6.5 To start AUTO PUNCH

After you have set up AUTO PUNCH press START and begin recording. The sequencer will automatically end the process at the PUNCH OUT measure that you have and switch back to normal play-back.

To exit from this correction process just press the SEQUENCER button on the right, next to the display, once more.

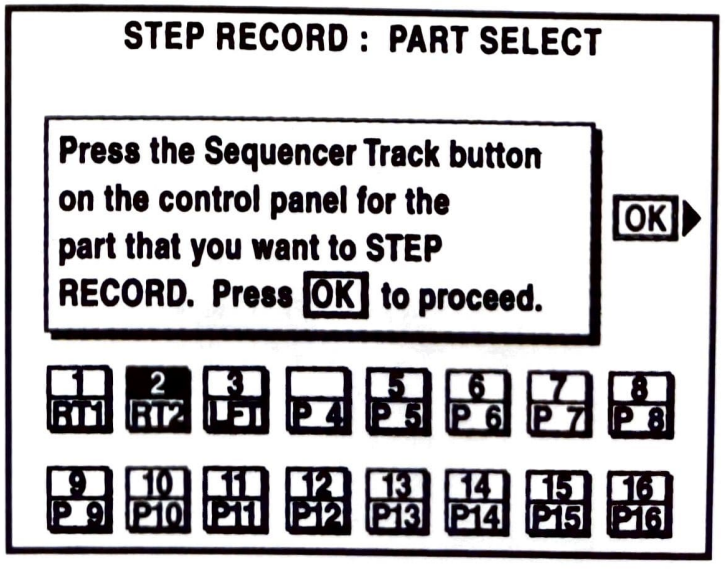
Use of the metronome is not recommended with PUNCH RECORD.

## 7.7.0 STEP RECORD

STEP RECORD allows you to programme a melody in step time, inputting each note one by one, selecting on which beat the note should play and how long it should be, as well as the velocity of the note and of course which note it should be.

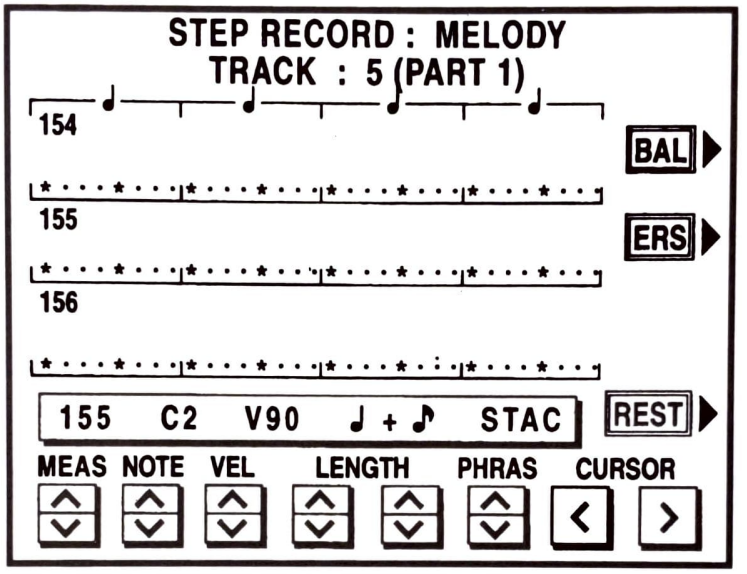
STEP RECORD can be used as an event editor of the type found on software sequencers. To get to know STEP RECORD it is useful to first use STEP RECORD to edit a song which you have already created (and saved on disk). So, first load your song from disk in to the sequencer.

Then press the SEQUENCER menu button and then select STEP RECORD in the LCD screen.



This STEP RECORD page allows you to select a track on which to record. The text in the screen asks you to select a track with the track buttons on the panel (the track LEDs will be flashing). With STEP RECORD you can edit only one track at a time. To practice you should select a track where there's a lot 'going on'.

After you have selected a track it will be marked in white on the display. Now press [OK] on the right-hand edge of the display, and the display will turn to the actual STEP RECORD page.




Please concentrate on the display on your keyboard now rather than on the display graphics in this book.

## 7.7.1 The STEP RECORD Display

Under the headings "STEP RECORD:" and "TRACK:" you see several dotted lines and numbers at the beginning of each line: the measure number. If you look closer you will see that each line comprises one measure, and each beat is divided into 8 dots. A maximum of three lines will be displayed at once, meaning that you can always look at 3 measures of the selected track simultaneously.

## 7.7.2 The CURSOR

To move inside the measures displayed you will use the CURSOR [<>] on the lower edge of the display (to the very right). With these two buttons you can scroll through a track. Any data such as a note or some control information will be displayed as an asterisk, the present CURSOR position being marked with a little white box. To get to know how to use this screen try moving the CURSOR around a bit.

With the MEAS switch, on the lower left of the screen you can move directly to the next or to the previous measure. This is helpful for moving to specific measures and will save you long trips with the CURSOR.

## 7.7.3 Note Information and Switches

Whenever you reach one of the asterisks (*) with the cursor the note set there will be heard. If several notes (chord) have been set there you will move through the individual notes with the cursor. Details about each note (asterisk) you reach will be shown in the box below.

The information given about a note is comprised of the name of the note and it's velocity, both of which can be altered using the NOTE and VEL switches on the lower edge of the display. An asterisk (*) can also indicate a piece of control data, for example START/STOP. This control data will also be indicated in the box below.

So far this has dealt with editing using step record. However you can of course enter an entire track from scratch with STEP RECORD and for this you need to use some additional functions to allow you to set the length and phrasing of each note.

## 7.7.4 Setting The Note Length

The length of the note has to be set in advance, as it cannot be changed afterwards. For this, two note length values are at your disposal. By adding two note values together you can achieve dotted notes, for example for a dotted quarter-note you will have to set a quarter-note plus an eighth-note-note. You can also set notes to a longer length than normally allowed for, for example to create an extreme legato effect with each note overlapping the next.

## 7.7.5 Setting the Right Phrasing

You can select from 4 different modes of phrasing with the PHRAS button: tenuto (TENU), normal (NORM), staccato (STAC) and very short (CUTT). Phrasing literally means the voiced part of the note, and it is important to consider this value in respect of the result you want to achieve (for example a legato string line might use TENU whereas a Mute Guitar figure might use STAC or CUTT) If you are unsure it is probably useful to set PHRAS to NORM.

## 7.7.6 Inputting Notes

To set a note, move the cursor to the desired position, set the note length and phrasing, and then play the note on the keyboard. You can delete this setting again with ERS (erase) on the right-hand edge of the display. But as the cursor moves on depending on the note length you have set, you first have to return the cursor to the note to be deleted. Remember that when playing the note you are also setting the velocity!

**ATTENTION!**

**Do not try to start the sequencer with START/STOP to listen to your settings as a sequence - this is not possible. By pressing the START/STOP button you can only set a START/STOP command on the track.**

## 7.7.7 Deleting Data

Of course every input (asterisk) can be deleted at any time. This process is especially useful for correcting mistakes.

To delete move the cursor to the note (asterisk) to be deleted and use the ERS (erase) button on the right-hand edge of the display. The CURSOR will remain in the same position to let you set a new note. Control inputs like START/STOP can of course be deleted in the same way.

## 7.7.8 Inputting Rests

In addition to normal note values and control data you can of course also input rests. Just select the time value of the rest (with the normal note LENGTH controls) and press the REST button. The cursor will move forward by the selected amount.

Now you have acquired the basic knowledge to edit or to create a sequence through STEP RECORD. Before trying a STEP RECORD input it is advisable to make some notes on song position, track number on paper. To use STEP RECORD effectively it is best to use the written score of a piece, or to first write out the melody that you are going to programme.

## 7.8.0 Storing a Chord Sequence

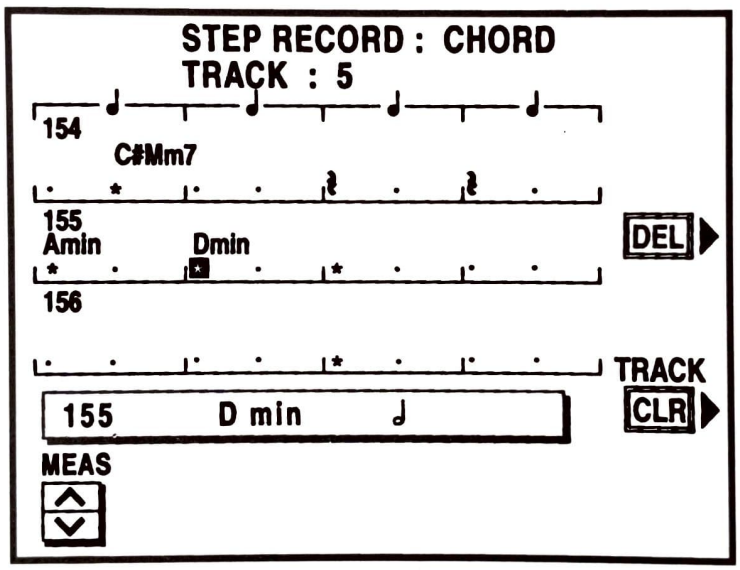
Now we come to another useful STEP RECORD mode: the step input of chords. This mode is also easy when using a written score. Let's suppose

you want to create a simple backing sequence using Auto Play Chord and you have the score for the song at hand. The score will tell you which chord is to appear in which bar.

Step input of chords can only be done on a CHORD track. When the keyboard is initialized this will be track 4. But if you cannot find a CHORD track you will first have to assign a track to CHORD using TRACK ASSIGN.

To change the track assignment of a track to CHORD first press the SEQUENCER menu button and then select TRACK ASSIGN in the LCD screen. Highlight the desired track with the TRACK buttons or the TEMPO/ PROGRAM wheel and change it's assignment to CHORD using the ASSIGN buttons. Press OK on the right side of the screen and then confirm.

Press the SEQUENCER menu button and then press STEP RECORD. Select the track marked CHD (with the track button on the panel) and then press OK on the right of the LCD screen.



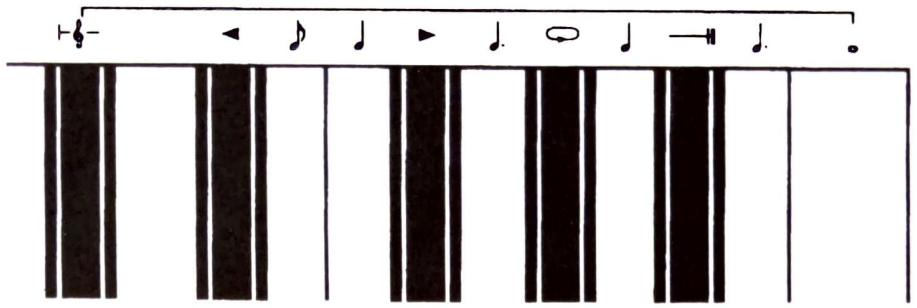

## 7.8.1 STEP CHORD Display

On the page appearing now you will again recognize the measure lines typical of STEP RECORD. Again a maximum of three measures are shown with the measure number on the left-hand edge. The smallest possible chord value that can be set is an eighth note.

In the lower info box the present song position is indicated as well as the chord set there and its length.

## 7.8.2 The tools

If you look to the top octave of the keyboard you will find the label CHORD STEP RECORD and a lot of note symbols and other symbols.




**Note value keys**

- Whole note
- Dotted half-note
- Half-note
- Dotted quarter-note
- Quarter-note
- Eighth-note

**Repeat key**

Press to end the chord-storing procedure and to specify automatic repeat playback of the stored progression.

**End key**

Press after the whole chord progression has been stored.

**Reset key**

Press to begin storing from the beginning.

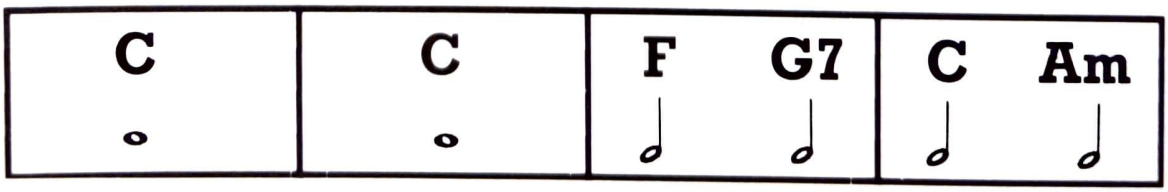
**Correction keys**

- ◄ Move back one chord.
- ► Move forward one chord.

The keys labelled there now serve as switches to set the chord length and other values. Therefore, you cannot play on these keys any more, but for chord input you will not have to do so anyway.

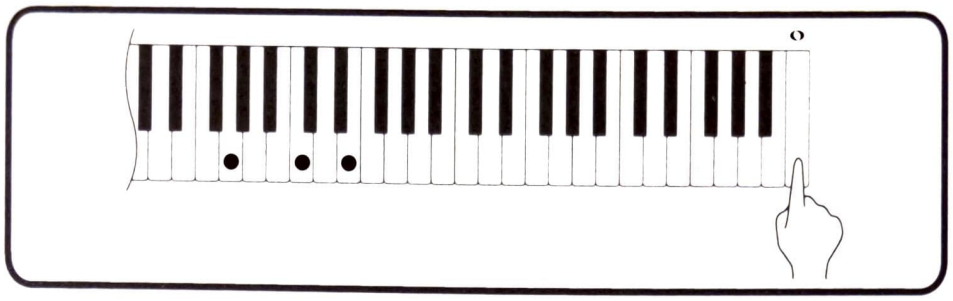
## 7.8.3 Chord Input

Let's take an example for putting in chords.



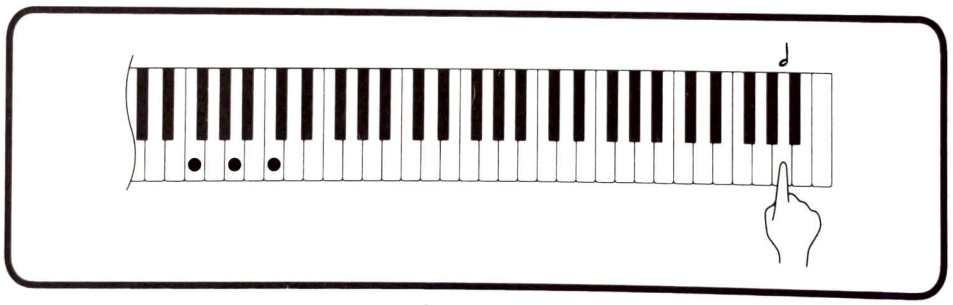

Under the chord numbers you will already find the note values for the chords you are about to set.

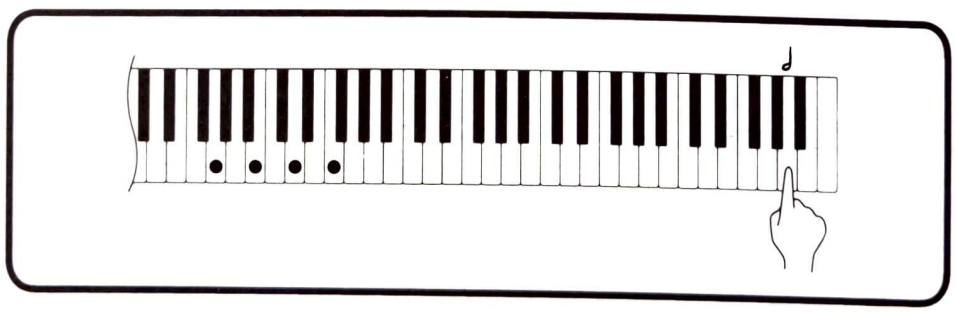
Now play a C major chord with your left hand and at the same time press the whole note key (top C) You will here a beep, meaning that the chord has been stored correctly.



In the display this C major input will be confirmed in the first bar line with an asterisk (*) and the letter "C" for C major. By now the CURSOR has moved one bar further. You can now set the second bar by repeating the same procedure (in C major).

In the third bar you have to set chords that last for only half a bar. To do this play an F major chord with your left hand and at the same time press the half note key (top A). Finally store the G7 chord in the same way.





For the fourth bar you repeat this procedure again with a C major chord and with an A minor chord.

If you want to you can also add a FILL-IN. Just press the FILL-IN button at the point where you want to play - for example after the second C major chord.

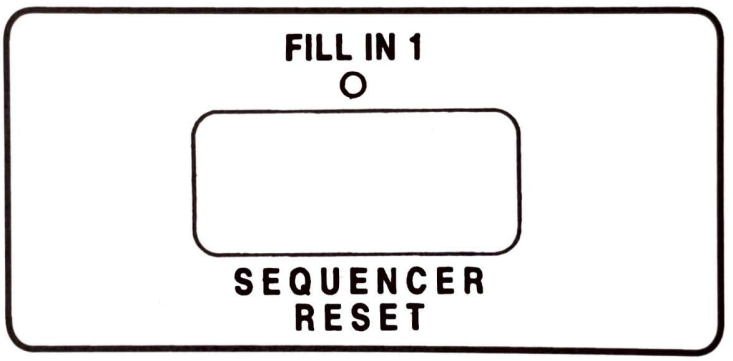
## 7.8.4 Ending Input

To end the chord input you can either press the End key or use the Repeat key. With the End key the chord pattern will always stop at this point. If you want the sequence to end with the Auto Play Chord ENDING press the ENDING button instead of the END key.

If you press the repeat key the song will play in a loop until you press the START/STOP button or the ENDING button. When you end the input with one of these buttons the sequencer will automatically return to the KN2000 main menu.

## 7.8.5 Playing Back Your Chord Sequence

Now press the START/STOP button again to listen to the chord sequence. It is also possible now to switch to another accompanying pattern. But if you switch back to the beginning of the chord sequence with SEQUENCER RESET




the sequencer will switch back to the accompanying pattern that you used during recording.

## 7.8.6 Correcting Chord Input

First press the SEQUENCER button again, select STEP RECORD and press the track button where you have stored your chords. You are now on the STEP RECORD: CHORD page again.

With the MEAS button (on the lower edge of the display) you can now move through the chord pattern. So, with MEAS you go to the faulty chord input and delete it with the DEL switch (on the left-hand edge of the display).

Having deleted the selected chord the sequence will have been shortened by the length of the chord. For example if it was originally a measure long, the sequence will now be a measure shorter. So at this point you must replace the chord with one of the same length. If you select a different chord length the entire chord structure of your sequence will change. (That may of course be just what you want to do!)

Rests are created by pressing the corresponding note value key without playing a chord at the same time. When you have set a rest only the drums from the Auto Play Chord pattern will play over this period. You can of course insert rests by moving the cursor to the required measure and pressing the desired note value key without holding a chord.

With the TRACK [CLR] switch you can delete the entire CHORD track at once. The sequencer will then be ready to start from scratch.

## 7.9 Changing the Sounds and Settings at the start of a sequence

The KN2000's sequencer takes a ***snapshot*** of the entire set-up of the instrument when you start recording, so that when you press SEQUENCER RESET it will return to the settings used at the start of the song, irrespective of what changes were made during the recording.

You may of course want to change this ***snapshot***, especially if you used the same sounds throughout the sequence and just want to change them in total. There is a slightly long procedure which will allow you to achieve this:-

1. Press SEQUENCER RESET (Fill-In 1) to make sure that the song is set back to the beginning.
2. Make all of your changes (this might just be Right 1 or an accompaniment pattern change).
3. Press the SEQUENCER menu button.
4. Press REALTIME RECORD in the LCD screen
5. Press any track that button that is already lit. (don't press any buttons or keys at this point!!)
6. Turn off the SEQUENCER menu button.
7. The track button that you pressed will have turned off because you didn't record anything, so turn it back on.

This admittedly convoluted procedure will change the snapshot, and after a while will become very easy to do!

# Initial Setting

8.0 INITIAL SETTING ..... 125

# 8.0 INITIAL SETTINGS

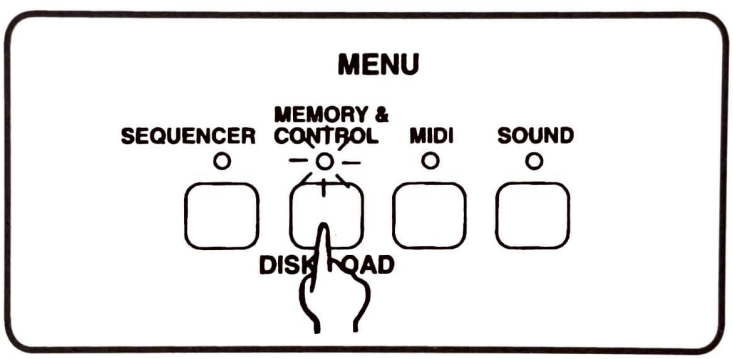
By initializing the entire keyboard or individual sections of it you will return it to its factory settings.

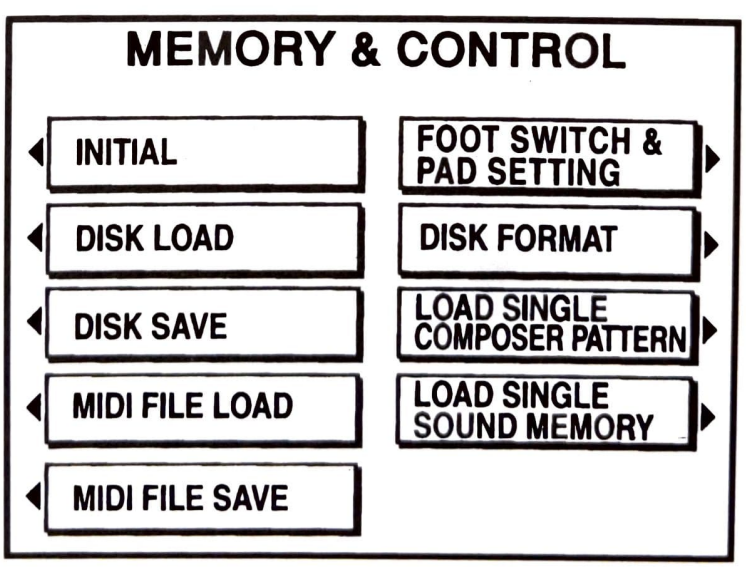
Initializing the keyboard can be as dangerous as it can helpful: on the one hand initializing will help untying some "knots" that may appear, on the other hand you may easily end up deleting data that you did not really want to lose.

Initializing should be done very carefully because of the risk of undesired deletion. Therefore, it is a good policy to save any data that you might need in the future before initializing, and of course always save any work before turning off the KN2000.

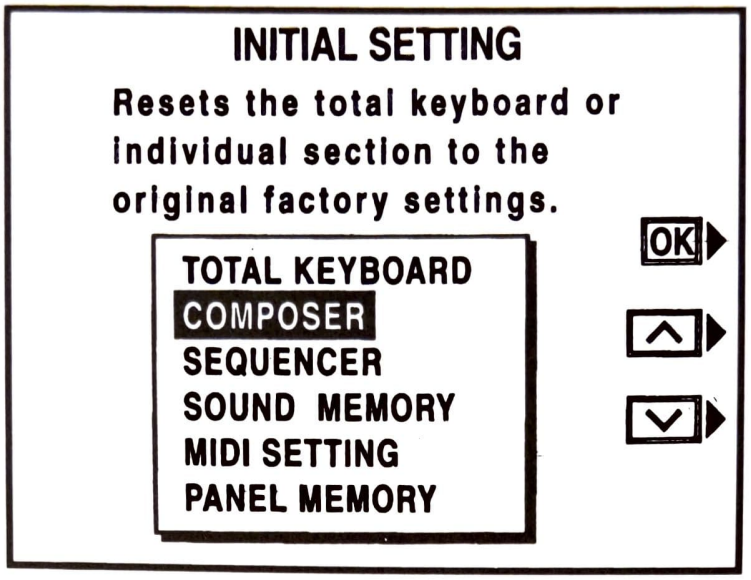
**How do I initialize?**

First of all press the MEMORY & CONTROL menu button.



Now select INITIAL in the LCD screen. The INITIAL SETTING display appears.




The INITIAL SETTING screen presents you with a box including a list of INITIAL options. You can select to initialize the TOTAL KEYBOARD or individual sections such as SEQUENCER, COMPOSER etc. If you just initialize the Composer the rest of the keyboard will remain unchanged, only the Composer will be set back to it's original factory settings.

Press [OK] to start the initializing process. Another WARNING! display will appear allowing you to interrupt the process with [NO]. To continue press [YES].

**HINT!**

***There is another way to initialize the keyboard completely. Before switching it on, press and hold the first three RHYTHM GROUP buttons (8 Beat 2, Jazz Rock&Soul, and DancePop). Whilst holding them turn on the Power. The display "ALL INITIAL SETTING" confirms that the entire keyboard has been initialized.***

# Saving and Loading with the Disk Drive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# 9.0 SAVE & LOAD

One of the most important parts of the KN2000 is the disk drive with its many possibilities to save and load. You may want to use Software from the wide range of Technics Music Disk Collection titles, or from third party software manufacturers, or the wide range of Standard Midi File software now available from all music stores. You will also be sure to want to save your own creations in the Sequencer, Composer or Sound Memories, or even Midi set-ups.

It is important to know that the KN2000 will keep all internal settings for only about 80 minutes after the keyboard has been switched off! Therefore, after every editing process you will read:

---

**REMINDER!**

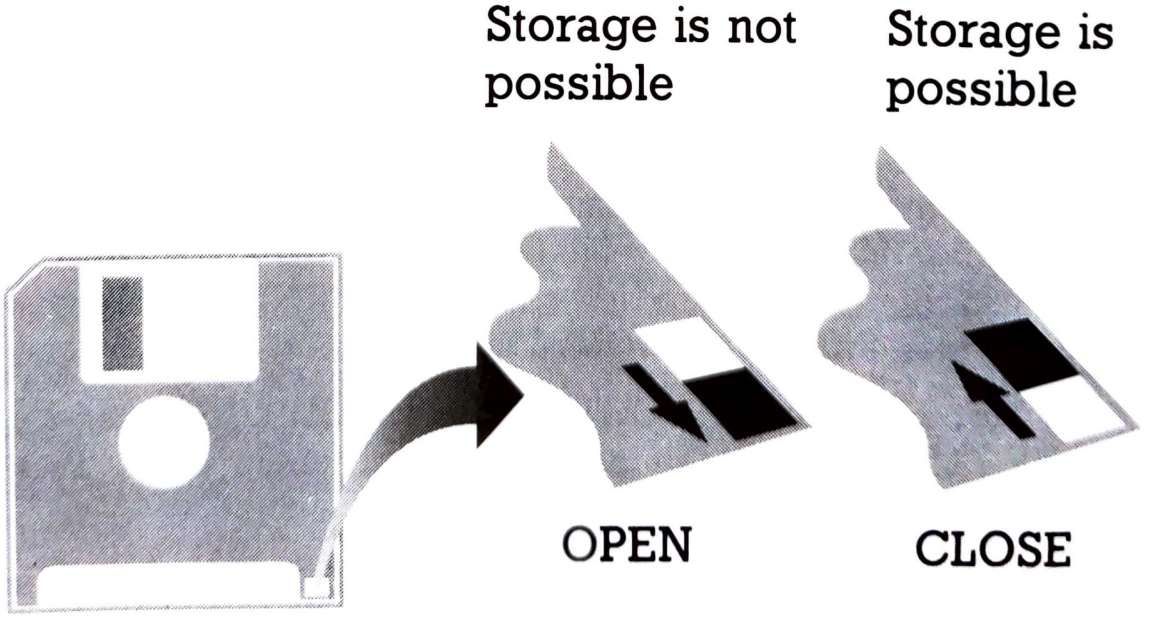
***The internal memory is retained for about 80 minutes after turning off the power. SAVE your work on Floppy Disk!***

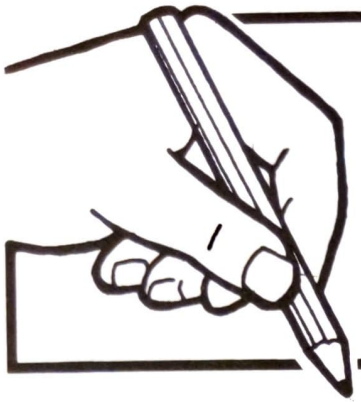
***A Floppy Disk can be compared to a file, in which you can keep all of your settings.***

---

## 9.1 FORMATTING a new Disk

The first thing to remember is that to save onto a new disk it has to be formatted. This only has to be done once, the first time you use a blank disk. So to format a blank disk make sure that it's write protect tab is closed and insert it in the disk drive.

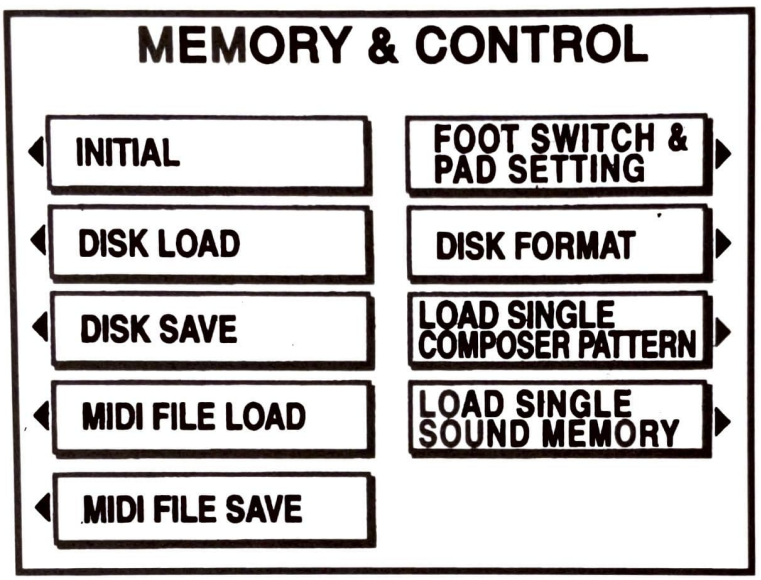




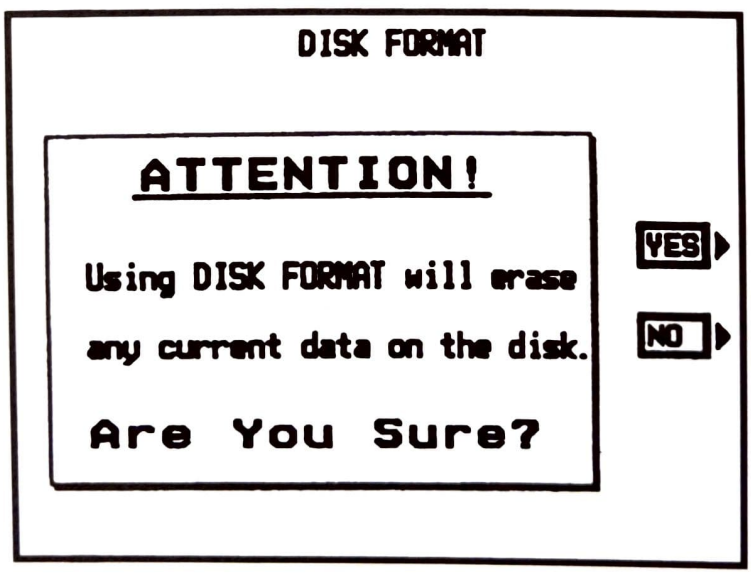
## HINT!

*You can only format the disk if the write-protect tab has been closed.*

Now press the MEMORY & CONTROL menu button.




Then press DISK FORMAT in the LCD screen.

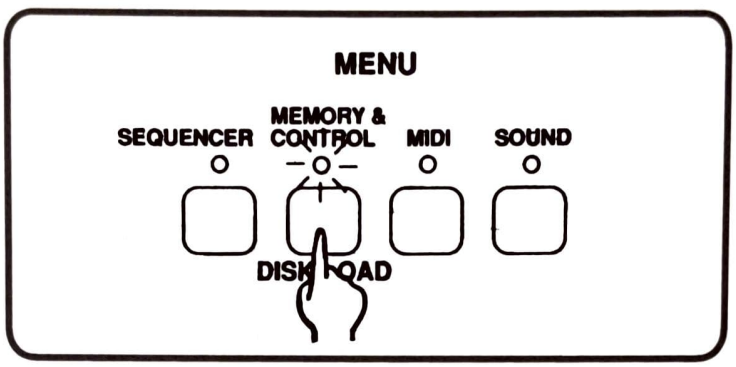



This WARNING page tells you not to format disks on which you have already saved, as the data on the disk will be completely deleted in the formatting process. If you are sure that the disk inside your KN2000 is empty press YES on the right. Press NO if in doubt and re-check that the disk is a new one.

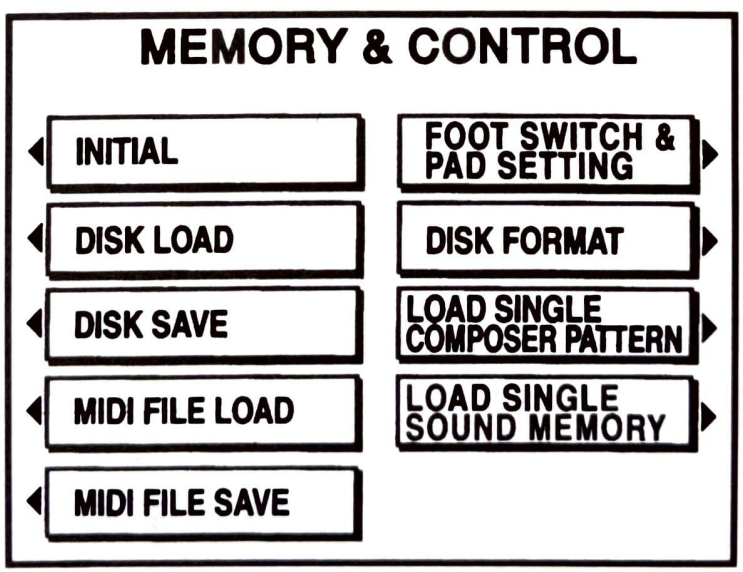
The formatting process will take about 1 minute! The KN2000 will then inform you that formatting is finished. After it is completed the display will automatically return to the main page. Your disk has now been formatted for the KN2000, so you can save data onto it.

## 9.2.0 Saving on Disk

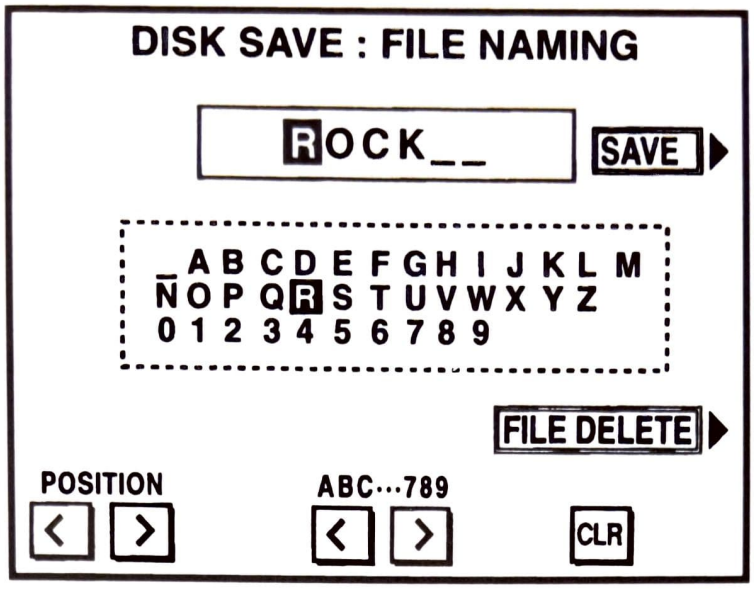
To get to the SAVE or LOAD page, first press the MEMORY & CONTROL menu button:




The MEMORY & CONTROL main menu will now appear on the display.



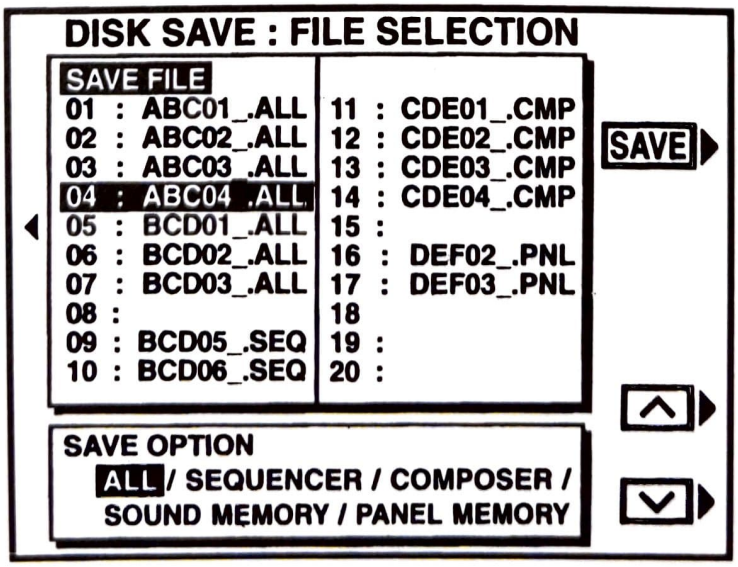

In this main menu you will find on the left-hand side two buttons labelled DISK LOAD and DISK SAVE. As we first want to look at how to save data, press DISK SAVE.




The DISK SAVE: FILE NAMING display will appear. In the upper box you find 6 spaces at your disposal in which you can enter letters and numbers from the lower box. This means that you can write a name to your file which can be up to 6 characters long. You should always name your files - if not you will have trouble relocating your data on the disk when you want to load it back.

At the bottom of the screen you will find two 'POSITION < >' buttons with which you can move the cursor in the writing field above, and two character 'ABC..789 < >' buttons with which you can move the cursor in the character field below. To operate more quickly you can also use the TEMPO/ PROGRAM wheel for cursor movements.

If you want to start from scratch you can delete your name input with the CLR (clear) button. After you have named your file press SAVE on the right-hand side of the display.



The disk is divided into twenty possible files into which you can save your data. Use the Up/Down buttons or the TEMPO/PROGRAM wheel to select the file where you want to save your data. As the disk is new you could use file number 1. The next time you come to save on the disk you will see your file in location 1 and can then save your next lot of data on file 2.

If you press SAVE (right side of display) again now the KN2000 will start to save on your disk. Your data have now been saved on the disk!

## 9.2.1 SAVE OPTIONS: description

You will have noticed the SAVE OPTION box at the bottom of the DISK SAVE: FILE SELECT display. With this function you can select how much data is saved in the file, either the whole keyboard or certain individual sections such as Sequencer, Composer etc.

The previous saving process described a process in which all internal settings of the keyboard are saved (OPTION "ALL"). Suppose you have created new COMPOSER memories and want just to save these on disk. To do this you do not have to save the entire keyboard setting but by using the "COMPOSER" OPTION you can save just your composer data.

## 9.2.2 Using SAVE OPTIONS

The save options available are:-

**ALL**

**SEQUENCER**

**COMPOSER**

**SOUND MEMORY**

**PANEL MEMORY**

If you only want to save sequencer data select the SEQUENCER option before saving. If you want to save only the PANEL MEMORIES select the PANEL MEMORY option before saving etc.

This means that if you load a SEQUENCER file, only the sequencer data in the keyboard will be replaced by the file that you are loading, the other internal settings remain unchanged. Additionally the loading time is significantly shorter than it would be to load the complete keyboard setting (OPTION "ALL").

Here is some more important information about OPTION saving: If you save COMPOSER memories in which you use newly edited sounds (sound memories A and B) with the "COMPOSER" save OPTION, these sounds will not be saved! In this case you should save with the "ALL" OPTION.

If you save a sequencer song in which you have used the DSP effect with the "SEQUENCER" OPTION, the DSP settings will not be saved! In this case you should again save with the ALL OPTION.

This is because in both cases the data relating to sound memories and DSP is not stored in the Composer (naturally). If in doubt use the ALL option.

To complete the saving process just press MEMORY & CONTROL again.

## 9.2.3 OPTION Abbreviations

Every file on your disk will be labelled with an OPTION abbreviation as a file extension so that you will be able to recognize the type of file when loading. These abbreviations are:

| | |
|---|---|
| **ALL** | *Entire internal memory* |
| **SEQ** | *Sequencer* |
| **CMP** | *Composer* |
| **SND** | *Sound memory* |
| **PNL** | *Panel memory* |

## 9.2.4 Disk Storage Capacity

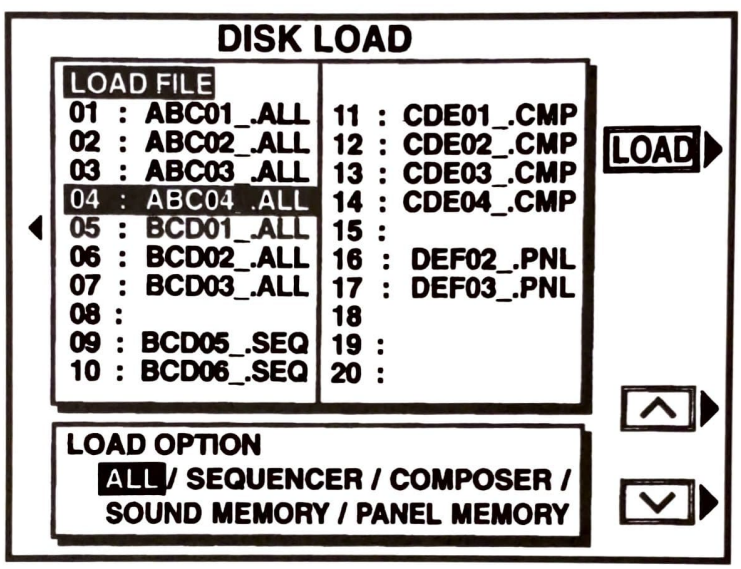
If you are saving with the ALL file option you will be able to save around ten songs on a disk. If you are familiar with the KN1000 and were used to saving 20 files on a disk you might wonder why with the KN2000 you can only save 10. The reason for this is simply that the internal memory sections of the KN2000 are much larger than those of the KN1000 while the capacity of the disk remains the same! Therefore, when saving with the ALL OPTION on the KN2000 about twice as much data is saved in a file than with the KN1000. But as the storage capacity of the disk is the same, only half as many ALL banks can be saved.

# 9.3 Loading From Disk

Having discussed saving on disk in detail, loading from disk requires only a simple explanation because for the loading process the same display pages are used, only that instead of SAVE you will read LOAD.

So, to load from disk first press the MEMORY & CONTROL menu button. Then select DISK LOAD in the LCD screen. The KN2000 will access the disk and the display will show you the entire disk contents on the following page.

The KN2000 has a convenient QUICK LOAD function, whereby if you just press and hold the MEMORY & CONTROL menu button for a short while it will go directly to the DISK LOAD screen.




Now use either the Up/Down buttons or the TEMPO/PROGRAM wheel to select the file you want to load. After this you only have to press LOAD in the LCD screen and the chosen file will be loaded. The display will then return to the main page.

Remember that when you load a file other than an ALL file, the data will be added to your current settings, for example a .CMP (Composer) file will only replace the Composer memories, other settings such as Panel Memory, Sound Memory, Sequencer etc will remain unchanged.

***Each subsequent time that you use the QUICK LOAD function the KN2000 will automatically advance to the next file on the disk. This function is very useful for performing musicians who can arrange their performance programme on the disk in the order that they are going to play. Loading is then just a two button procedure, press and hold MEMORY & CONTROL and then press LOAD in the LCD.***

## 9.4 Copy Protection

You can put copy protection on your files which would prevent the file being saved without inputting a password. This function is not detailed in the owner's manual!

When saving proceed as usual until you get to the DISK SAVE: FILE SELECTION page. Now press the ACCOMP 1 BALANCE button seven times. The display will then read DISK SAVE: PASSWORD, asking you to put in a password. Enter a two character password in the writing field with the two question marks. To select characters use the cursor functions 'POSITION <>' and 'ABC...789 <>' as with file naming. After you have then pressed SAVE your data will be saved with this password.

**Don't forget to make a note of your password!**
From now on, when loading this file the password information will always be loaded too. If you try to save the file again, perhaps after making some changes (no matter on which disk) the KN2000 will always ask for the password. You will always have to give the password - if not the KN2000 will not save.

**You have been warned!!**

**ATTENTION!**

**If a copy-protected file has been loaded from disk the PASSWORD will be held in the keyboard until it is switched off, initialized, or a file without a password is loaded.**

**If you have loaded a disk with copy protection and turn the keyboard off, the next time you turn the keyboard on it will automatically initialize itself. If you load any commercial software that has copy protection be sure to initialize the keyboard before starting any work of your own, as otherwise you will not be able to save.**

## 9.5.0 MIDI FILE LOAD/SAVE: description

With the development of sequencers keyboards and synthesizers as well as stand alone Midi sequencers and Computer software, many different companies were each establishing their own software format.

In consequence the International Midi Association decided on a data format which would provide a generic sequencer file that could be adopted by all manufacturers, allowing software producers to create software which would load on any product. The format is called STANDARD MIDI FILE often abbreviated as MIDI FILE or SMF.

To be certain that the correct sounds and drums would be selected on any product a protocol called GENERAL MIDI was also decided upon (see:**10.12 General Midi**) creating a wide multi manufacturer platform for software production. Naturally the software itself is of the performance type (recorded music) and STANDARD MIDI FILE is only relevant to sequencer data.

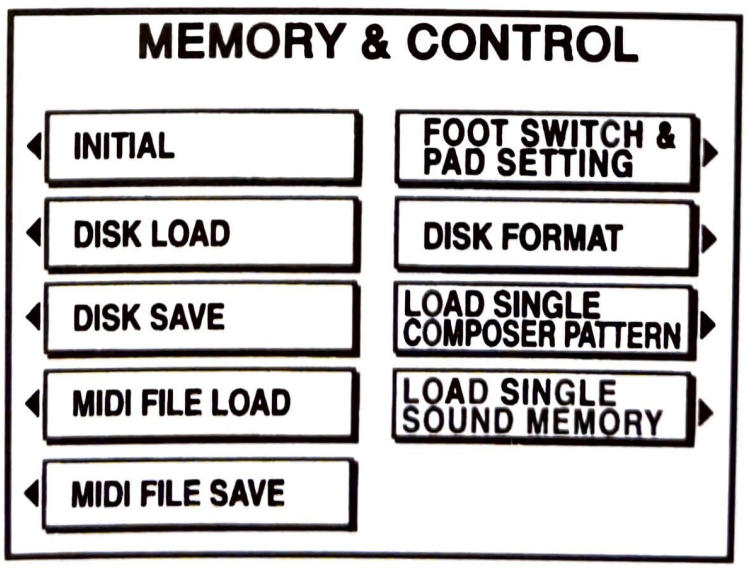
The KN2000 is both STANDARD MIDI FILE and GENERAL MIDI compatible and is therefore able to save sequencer songs in MIDI FILE format as well as to load sequencer songs saved in MIDI FILE format.

There are actually two common STANDARD MIDI FILE formats, format 0 and format 1. The difference between them is that in format 0 all of the data is on one track, and in format 1 the data is on separate tracks. Whilst most commercial software is in format 0, the KN2000 is able to load either.

## 9.5.1 MIDI FILE SAVE

This means you can save any of your songs as a MIDI FILE on the KN2000 and play it on other manufacturers keyboards or load it into a software sequencer on a computer. (etc.)

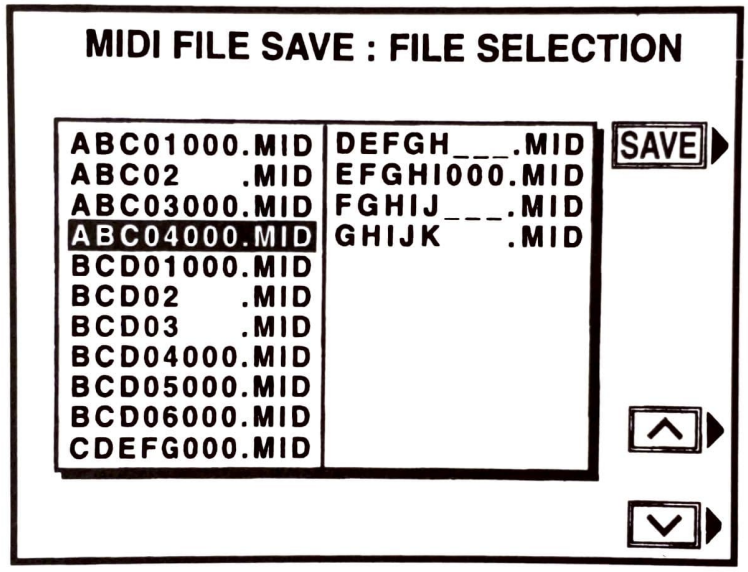
To do this press the MEMORY & CONTROL menu button and select MIDI FILE SAVE in the LCD.



The DISK SAVE: FILE NAMING display will appear. In the upper box you find 8 spaces at your disposal in which you can enter letters and numbers from the lower box. This means that you can write a name to your file which can be up to 8 characters long.

You should always name your files - if not you will have trouble relocating your data on the disk when you want to load it back.

At the bottom of the screen you will find two 'POSITION < >' buttons with which you can move the cursor in the writing field above, and two character 'ABC...789 < >' buttons with which you can move the cursor in the character field below. To operate more quickly you can also use the TEMPO/ PROGRAM wheel for cursor movements. When the FILE name has been set press "SAVE".




In the MIDI FILE graphics shown here several MIDI FILE banks are already on the disk. If you are saving a MIDI FILE on a blank disk the disk contents display will of course be empty.

With the Up/Down buttons on the right-hand edge of the display you can now select a free memory as usual. To complete the saving process press SAVE again. Your song will now be saved as MIDI FILE.

## ATTENTION!

**Remember that when saving a MIDI FILE the PANEL MEMORY and the COMPOSER settings are not saved! This data would not be accepted by other keyboards anyway.**

## 9.5.2 MIDI FILE LOAD

Basically a MIDI FILE is loaded just like a normal Technics file. But to load a MIDI FILE you should not press DISK LOAD but of course MIDI FILE LOAD. You will find the MIDI FILE LOAD button in the MEMORY & CONTROL main menu.

## 9.6.0 SINGLE LOAD: description

If you look through any Keyboard magazine today you will find a wide range of software available for the KN2000, both in SMF format and of course for specific Technics features such as additional accompaniment patterns and sounds. When you buy one of these disks you may find that you want to load a few of the individual new patterns perhaps to combine with patterns from other disks. The SINGLE COMPOSER LOAD and SINGLE SOUND MEMORY LOAD functions are designed for this purpose.

## 9.6.1 SINGLE LOAD from a KN1000 Disk

The KN2000 offers you the possibility to load individual COMPOSER memories or SOUND memories from a disk. The only condition is that the disk from which you are loading is a KN2000 disk.

If you previously had a KN1000 and want to use the single load function with disks created on the KN1000, just load the entire file in the normal way and then re-save it on another disk. As it has now been saved in KN2000 format you will be able to use the single load function.

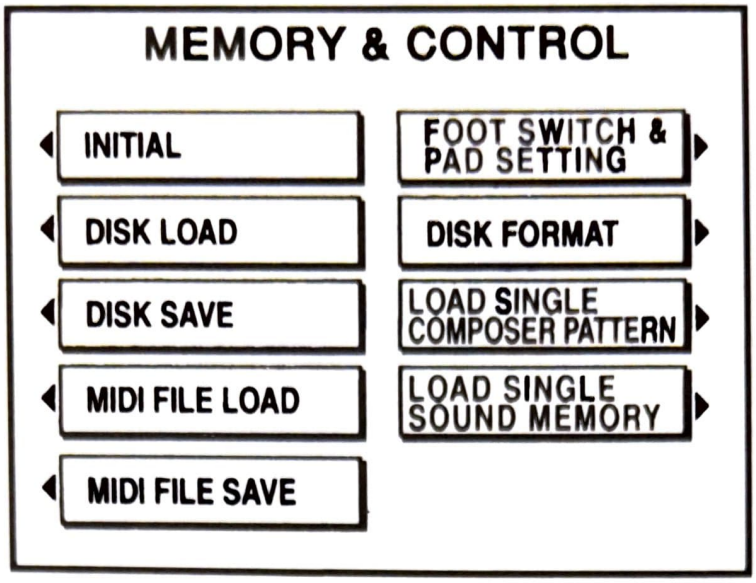
## 9.6.2 Preparation for SINGLE LOAD

Before you start loading individual memories first choose the memory (Composer or Sound) to be loaded. It is usually helpful to write down the exact details (address) of the memory, for example (in the case of a single Composer memory):

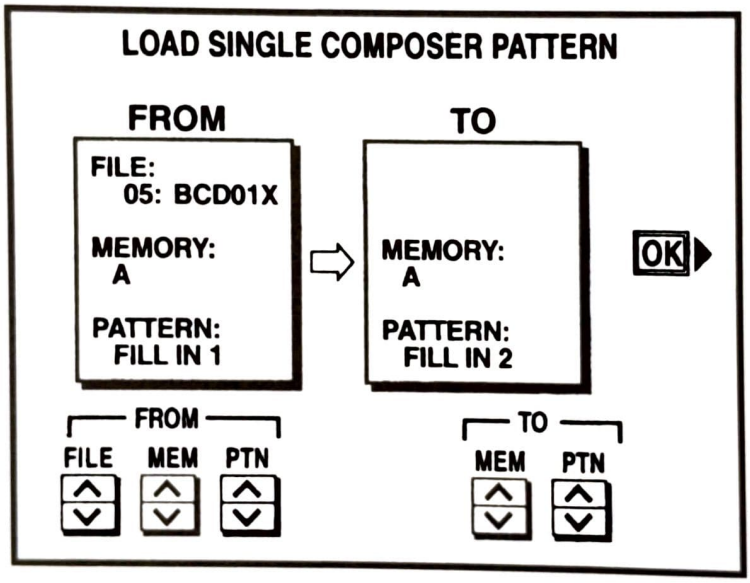
**FILE:** number and name?
**MEMORY:** A or B?
**PATTERN:** MEMORY ?

## 9.6.3 Loading Process for SINGLE COMPOSER memories

Put the disk from which you want to load into the DISK DRIVE and press the MEMORY & CONTROL menu button.




Select LOAD SINGLE COMPOSER PATTERN in the LCD screen. The display will show you two boxes, asking you FROM where and TO where you want to load.




In the **FROM** box enter the details of the single Composer pattern that you want to load, as follows:-

The File number (the name of the file will also be displayed)
The Composer Memory bank (A or B)
The Pattern (Eg: Memory 1, 2, 3....)

For these settings, use the Up/Down buttons **FILE, MEM** and **PTN** on the lower edge of the display marked under the heading FROM.

In the **TO** box enter the details of the Composer memory into which you want to load the pattern as follows:-

The Composer Memory bank (A or B)
The Pattern (Eg: Memory 1, 2, 3....)

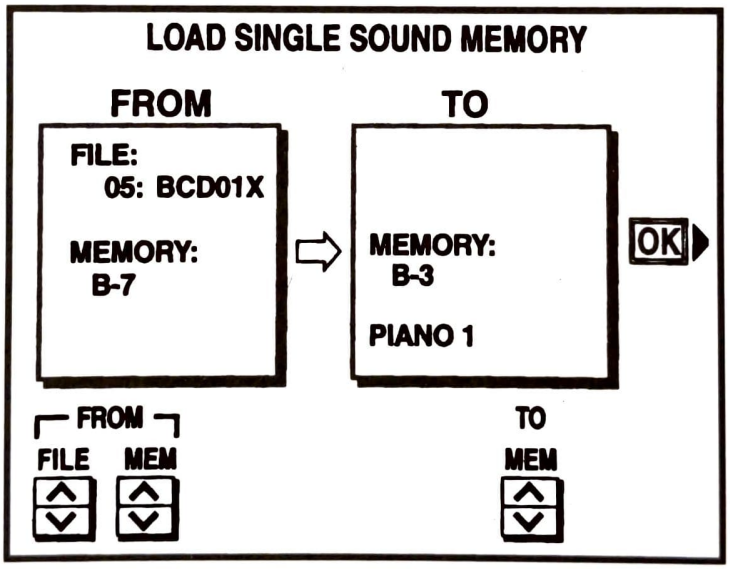
Here again you use the Up/Down buttons **MEM** and **PTN** on the lower edge of the display marked under the heading TO. The TO box will also display the name of the pattern already in the chosen location, so be sure not to overwrite something that you need to keep!

Finally confirm the process by pressing OK. The KN2000 will now load the COMPOSER you have selected combining it with the existing data in the keyboard. To check this, leave the process by pressing MEMORY & CONTROL and check that your pattern has been loaded successfully by pressing the appropriate Composer memory button (A or B) and looking in the screen.

Now don't forget to save the newly combined data onto disk!

## 9.6.4 Loading Process for SOUND MEMORIES

Loading individual sounds works in an almost identical way to loading individual Composer memories. Press MEMORY & CONTROL and select LOAD SINGLE SOUND MEMORY.




In the **FROM** box enter the details of the single Sound memory that you want to load, as follows:-

The File number (the name of the file will also be displayed)
The Sound Memory number (Eg: A1, A2, A3.....)

For these settings, use the Up/Down buttons **FILE** and **MEM** on the lower edge of the display marked under the heading FROM.

In the **TO** box enter the details of the Sound memory into which you want to load the pattern as follows:-

The Sound Memory number (Eg: A1, A2, A3.....)

Here again use the Up/Down button **MEM** on the lower edge of the display marked under the heading TO. The TO box will also display the name of the sound already in the chosen location, so be sure not to overwrite something that you need to keep!

Finally confirm the process by pressing OK. The KN2000 will now load the SOUND you have selected combining it with the existing data in the keyboard. To check this, leave the process by pressing MEMORY & CONTROL and check that your pattern has been loaded successfully by pressing the appropriate SOUND memory button (A or B) and looking in the screen.

Now don't forget to save the newly combined data onto disk!

# MIDI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# 10.0 MIDI: description

In the days before Midi there were some basic communication standards for analogue synthesizers which in general allowed you to interface two synthesizers. With the advent of Digital instruments in 1982 an international communication standard called MIDI was agreed upon.

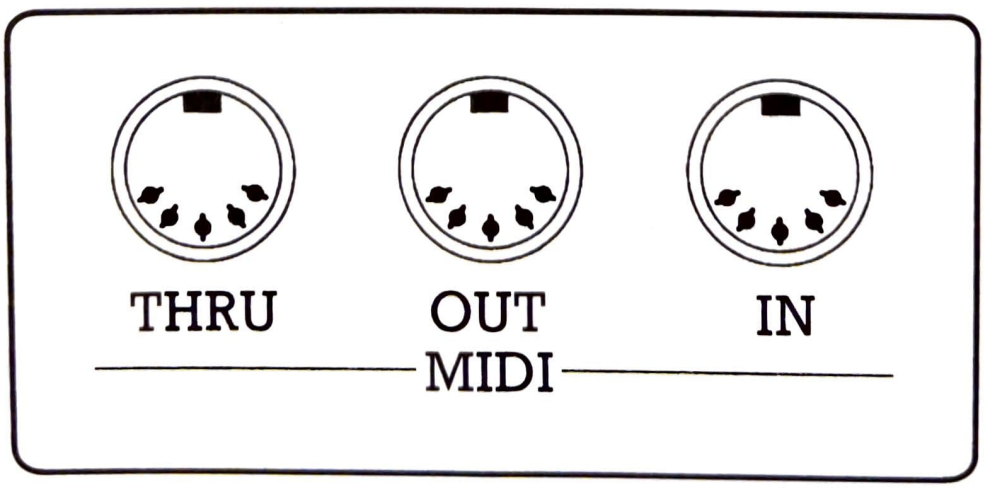
MIDI stands for "Musical Instrument Digital Interface" and was established as a hardware and software specification which would make it possible to exchange musical information (notes, sound changes, expression control etc) between musical instruments from different manufacturers. Although originally conceived as a live performance system (to play the sounds of one instrument from the keyboard of another, thus combining the power of the two instruments) Midi has had an enormous impact on recording studios, video production and composition.

With Midi you can add the sounds of another product (even of another manufacturer) to the KN2000, or use a Computer sequencer programme or play the KN2000 from another product such as a Digital Piano or an Organ.

The KN2000 has a very comprehensive Midi specification requiring a certain degree of setting up depending on your objectives.

## 10.1 Connections

The basic connection sockets for Midi are in the form of simple five pin DIN sockets, labelled IN, OUT and THRU. (Some keyboards may not have a THRU socket)



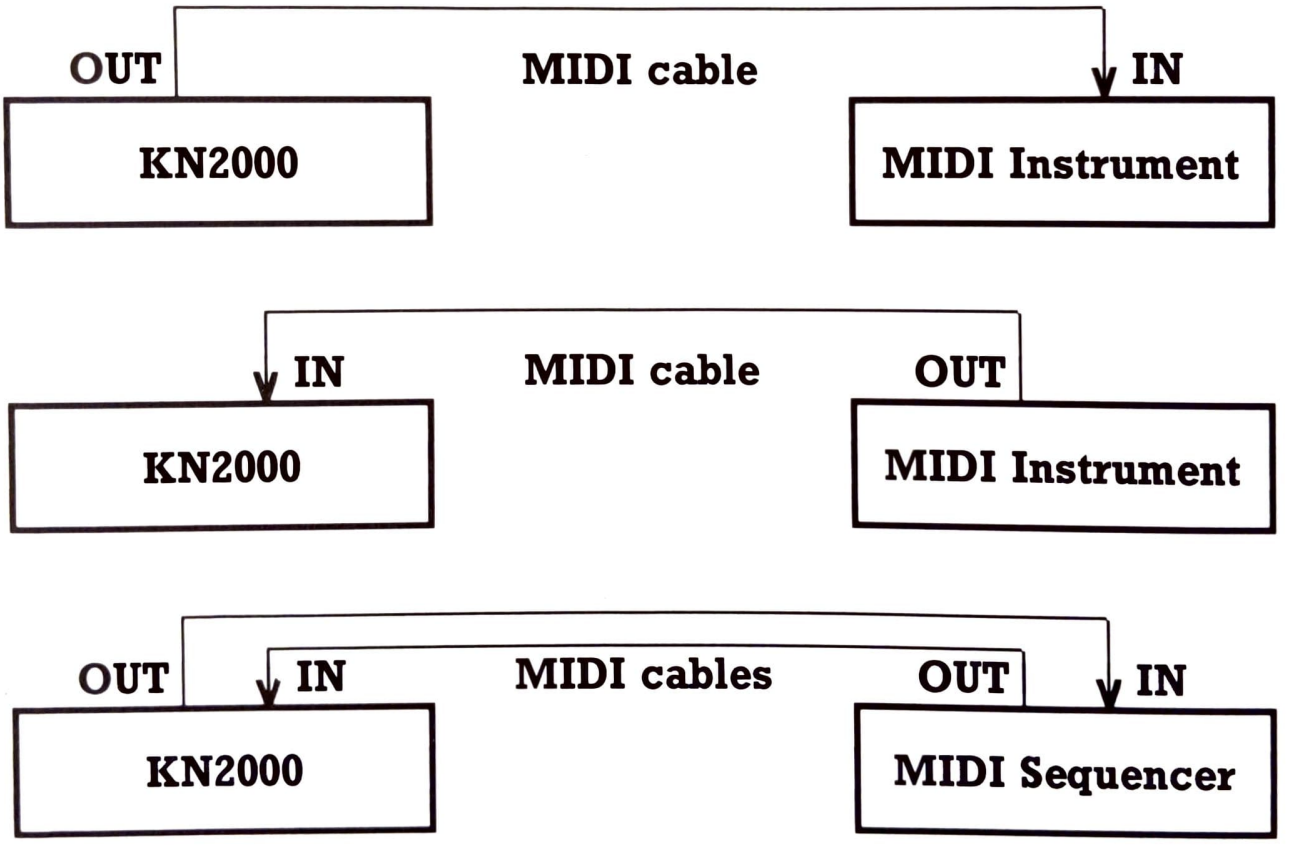
**IN:** Receives Midi data from external instruments (for example playing the KN2000 from another Keyboard or Sequencer Connect the OUT of the other Keyboard to the IN of the KN2000).

**OUT:** Transmits data from the KN2000. If you want to play the sounds from a module from the KN2000, you would connect the OUT of the KN2000 to the IN of the module.

**THRU:** Re-transmits a replica of the data received by the KN2000, but not data from the KN2000 itself. Useful if you want to create a 'chain' of instruments all playing from the same master unit (perhaps a Computer Sequencer).

In situations when you are sending and receiving MIDI data at the same time (for example when working with an external sequencer) both the IN and OUT sockets have to be connected.

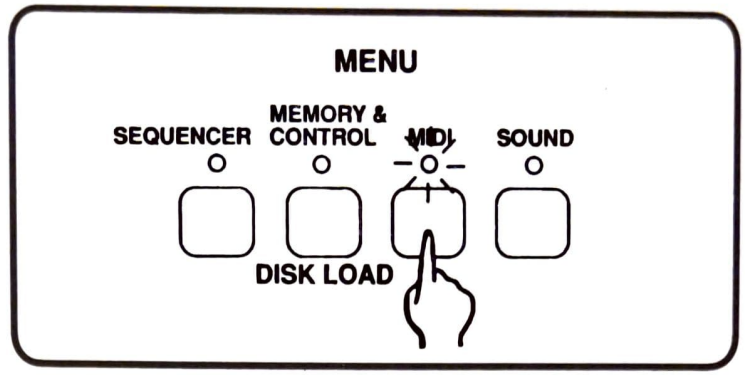
Here are a few connection examples:



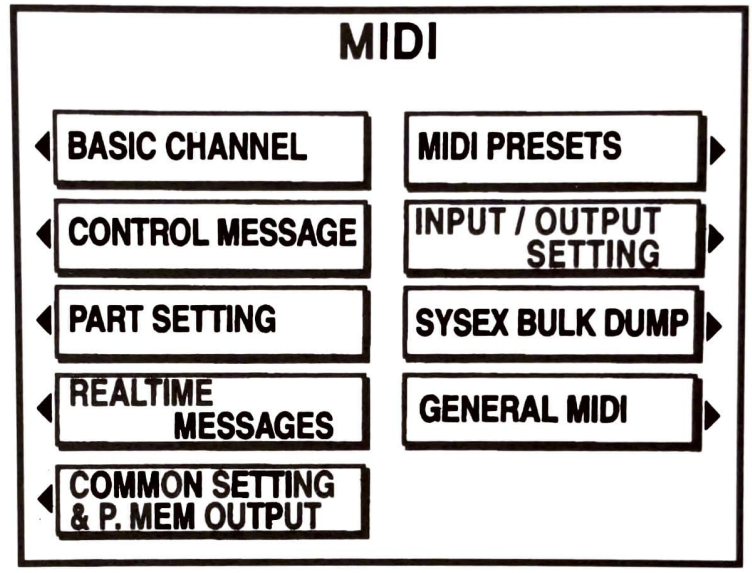

## 10.2.0 MIDI Channels

The most important thing to consider in setting up the KN2000 to work with another product is the correct assignment of MIDI channels. MIDI data is sent over any of 16 channels. If you are sending on MIDI channel 1, then you will have to set the same channel on the receiving instrument. The same applies for receiving MIDI signals.

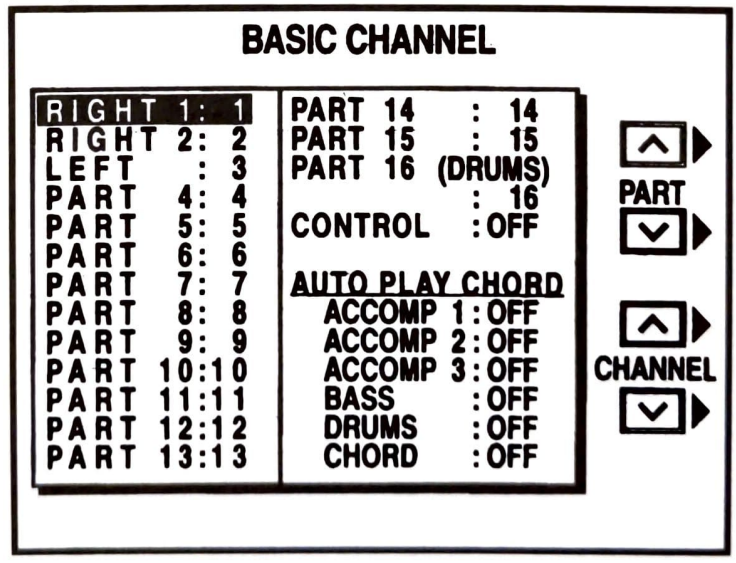
Each of the KN2000's parts (RIGHT 1, RIGHT2, LEFT, PART 4.....) can be set to a different (or the same) Midi Channel. The KN2000 has a master screen which allows you to assign different channels to different parts. Press the Midi menu button:




The MIDI main menu appears.




Then select BASIC CHANNEL in the LCD screen.




The KN2000 has basically been divided into 16 parts and this screen enables you to set a different Midi channel for each part. On this page you can also assign a MIDI channel to the individual parts of Auto Play Chord. In the initial setting the channel numbers are identical to the part numbers, with drums on channel 16.

## 10.2.1 Changing MIDI Channels

To receive MIDI data correctly it will sometimes be necessary to change the channel assignments.

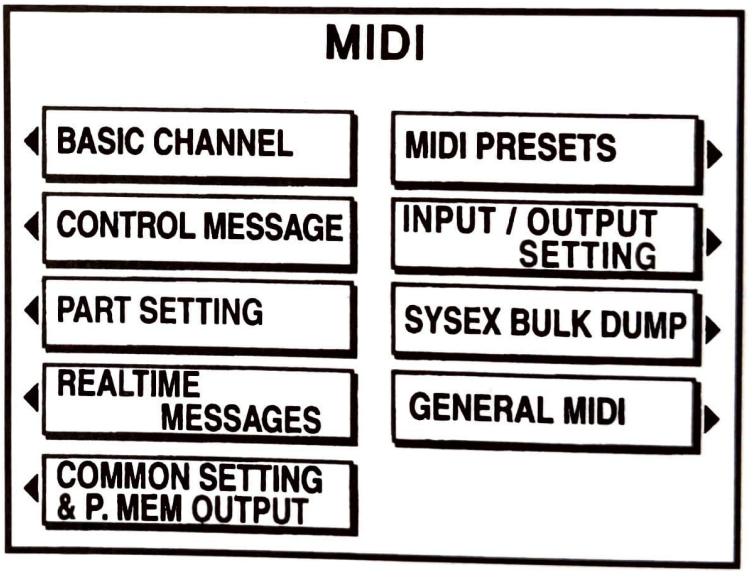
To do this use the Up/Down buttons as usual. With PART you can scroll through the individual parts, and with CHANNEL you can set the desired channel number. To move through the individual parts more quickly you can also use the TEMPO/PROGRAM wheel. It is possible to set the same channel number for several parts. You might want to do this to layer several sounds on the same channel.

# 10.3 CONTROL MESSAGES

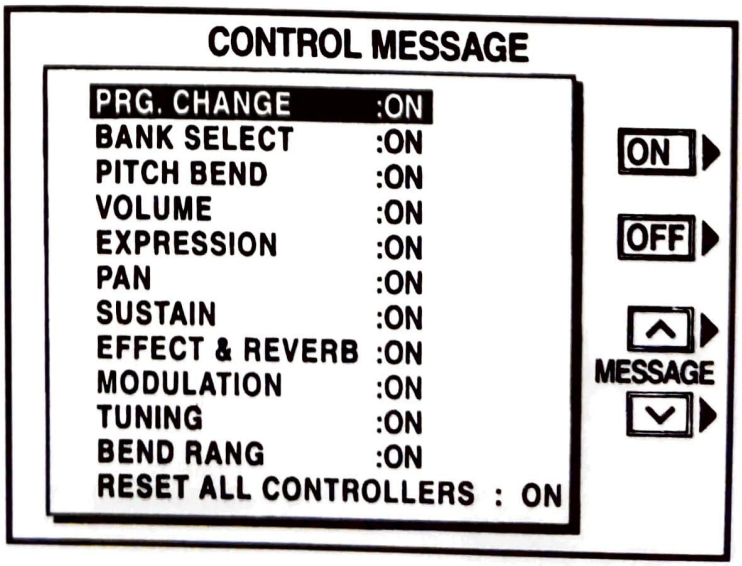
A CONTROL message in the KN2000 is something other than a note, such as Program Change (typically a sound change), Pitch Bend or Modulation etc.

The KN2000 has a master screen which allows you to enable or disable any of these functions.

Press the Midi menu button.




Then select CONTROL MESSAGE in the LCD screen.



On this page all 'control' functions are listed. After every function you will see if it is enabled or disabled (On/Off) To make your settings use the Up/Down buttons on the right-hand edge of the display as always. MESSAGE moves the highlight bar up and down through the different functions and On/Off is self explanatory!

**PRG.CHANGE:** a Program Change is typically a sound change sent over Midi. In the case of the KN2000 it could also be a change of Rhythm. In Midi there are a maximum of 128 Program Change messages.

**BANK SELECT:** is an extension to the Program Change message giving variations to each Program Change (as there are only 128 Program Changes possible, and the KN2000 has 250 sounds!) This message has no meaning without Program Change. Bank Select is used in the KN2000's TECH mode for Program Change (see: **10.6.3 Setting 3** (Program Change Mode))

**PITCH BEND:** Selects whether movements of the Pitch Bend wheel are sent from the KN2000 or recognised.

**VOLUME:** Selects whether changes in volume (part balance) are sent and received. This function relates to Midi controller 7 (main volume)

**EXPRESSION:** Selects whether volume pedal movements sent over Midi or whether Expression data (Midi controller 11) is received.

**PAN:** Selects whether Panning messages (Midi controller 10) are sent or received. This function is especially useful when using an external sequencer, allowing you to alter the position of the sound on a Midi channel in the stereo spectrum.

**SUSTAIN:** Selects whether sustain On/Off messages are sent or received including messages from the sustain pedal (Midi controller 64).

**EFFECT & REVERB:** Selects whether Digital Effect, DSP Effect and Reverb can be switched on and off over Midi, or whether a message is sent from these buttons when they are pressed. (Midi controllers 93 and 94 are used for Digital Effect and DSP Effect but a System Exclusive message is used for Reverb On/Off)

**MODULATION:** Selects whether movements of the Modulation wheel are sent from the KN2000 or recognised.

**TUNING:** Selects whether Key Shift and Tuning changes are sent by each part of the KN2000 (these functions are found in the SOUND SETTING page of the SOUND menu). This is another useful function when using a

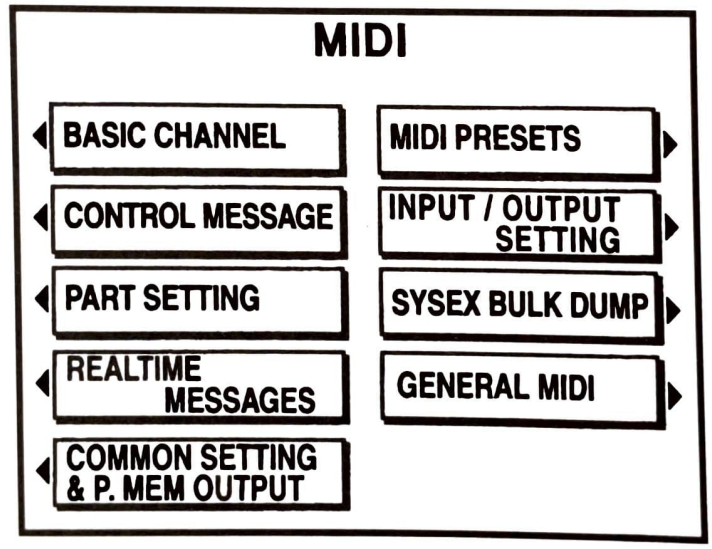
Computer sequencer, enabling you to alter the pitch or tuning of a part from an external source. (In the Midi specification Key Shift is described as ***Coarse Tuning***, and Tuning as ***Fine Tuning***).

**BEND RANGE:** Selects whether changes in Pitch Bend range are transmitted or received.

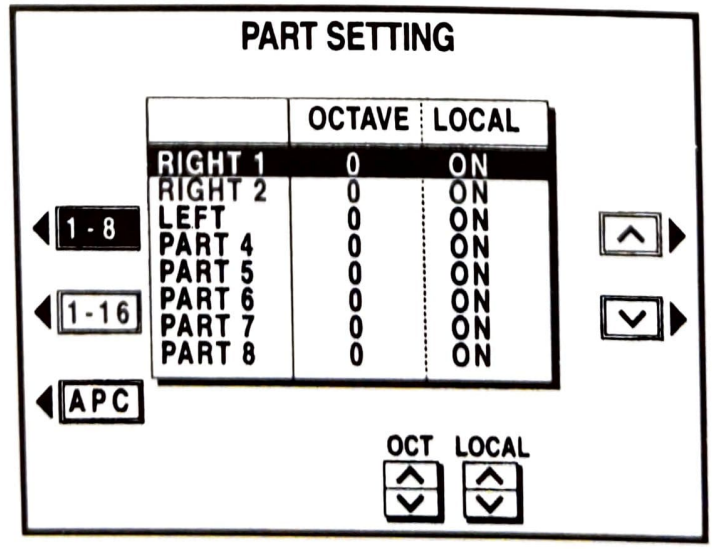
**RESET ALL CONTROLLERS:** is self explanatory as a function. A software sequencer may offer the facility to send this message, particularly useful if there is some Pitch Bend still active putting a part out of tune (for example) The initial setting of the CONTROL MESSAGE page is for all functions to be set to ON. As such you can look at this page as a filter page, whereby the various functions can be disabled from transmission or filtered out from reception.

# 10.4.0 PART SETTING

PART SETTING enables you to alter the Octave setting of each part over Midi and to set Local On/Off for each part. Press the Midi menu button.




Select PART SETTING in the LCD screen.



## 10.4.1 Examples of Use of PART SETTING

**OCTAVE:** You may want to alter the octave pitch of any part over Midi, for example to set an interval of an octave between the sound of a module, and the sound of the KN2000. Also, if you set a part to +1 Octave then data received by that part will automatically be set to -1 Octave. So if you want to alter the Octave of Midi data coming into the KN2000 this is an easy way to do it.

**LOCAL:** This function determines whether the KN2000's sound generator is connected to the relevant part. If you only want the external instrument's sounds to be played for example from Right 1 (not the KN2000's sounds) then set LOCAL for Right 1 to OFF.

This function is also very useful if you are using the KN2000 with a Computer sequencer. Software sequencers have a function which is variously called 'THRU', 'ECHO', 'SOFT THRU' which echoes the data coming in on the IN socket of the Computer back out on the OUT socket, merging it with any data being sent out.

In so doing it alters the Midi channel of the notes you are playing to the Midi channel of the track on which you are recording. In consequence, if you set the Right 1 part of the KN2000 to LOCAL OFF, any notes you play will not directly play on the KN2000, however the Midi data is sent to the computer and then sent back out to the KN2000 on the Midi channel of the track being recorded playing the part set to that channel. Using this feature you can literally turn the KN2000 into a master keyboard and sound module with the computer in line between them.

## 10.4.2 How to use PART SETTING

In the left column the individual parts of the KN2000 are listed. With the Up/Down buttons on the right side of the display you can move up and down on this list. To get to the other parts press 9-16 on the left-hand edge of the display. With 1-8 you return to the first parts. To get to the Auto Play Chord parts select APC.

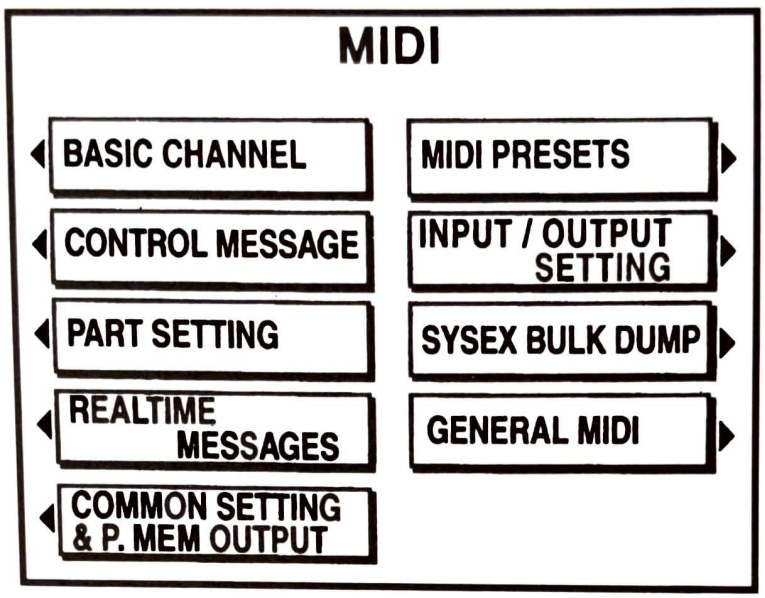
In the OCTAVE column select any required octave shift and in the LOCAL column select whether the part is played by the KN2000 or just sent via MIDI. To make your settings use the two buttons on the lower edge of the display.

To leave this menu press EXIT or the MIDI button.

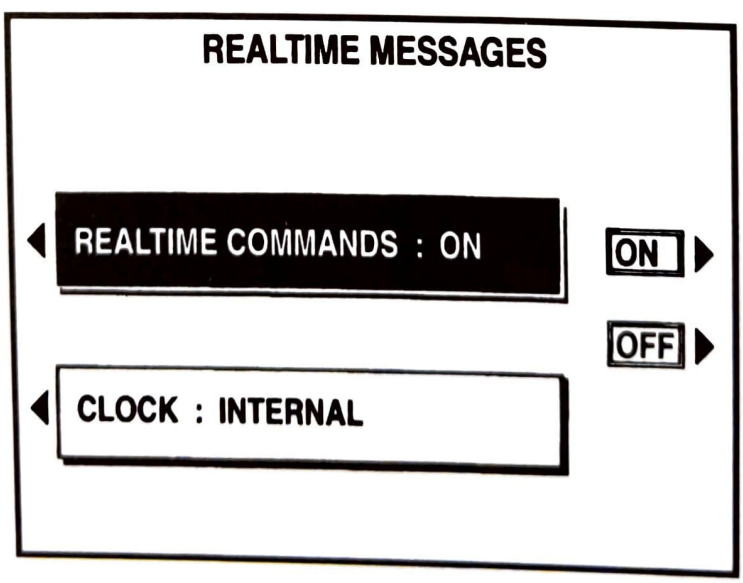
# 10.5.0 REALTIME MESSAGES

The REALTIME MESSAGES page deals with some global MIDI commands relating to Midi System Realtime.

Press the Midi menu button.




Select REALTIME MESSAGES in the LCD screen




This display is very simple as it only has two functions.

## 10.5.1 REALTIME COMMANDS

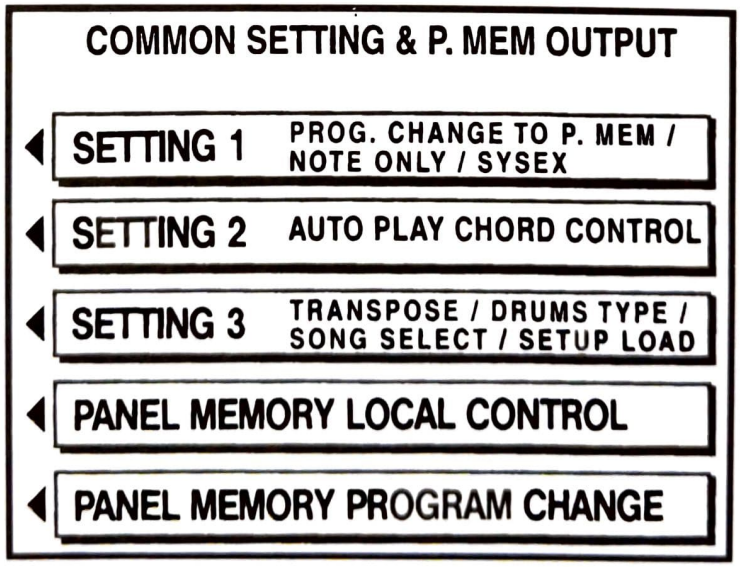
REALTIME COMMANDS relates to function of the START/STOP switch. Basically the functions dealt with are Start/Stop and Continue Start. If you want the KN2000's rhythm to start from an external instrument, REALTIME COMMANDS must be set to ON. Equally if you want the KN2000 to send a start message to another product it should be set to ON. However, if you don't want the KN2000 to send a start message to another product (maybe another keyboard or organ) set REALTIME COMMANDS to OFF.

## 10.5.2 CLOCK

If several instruments which have Auto Play Chord or a Sequencer are linked together, for the various rhythms and sequences to run in time with each other one unit has to be the master clock. If the KN2000 is the master unit leave it's clock on internal and set the other units to Midi (or external) clock. If the KN2000 is a 'slave' instrument set it's clock to Midi. Remember that for anything to happen REALTIME COMMANDS must be set to ON.

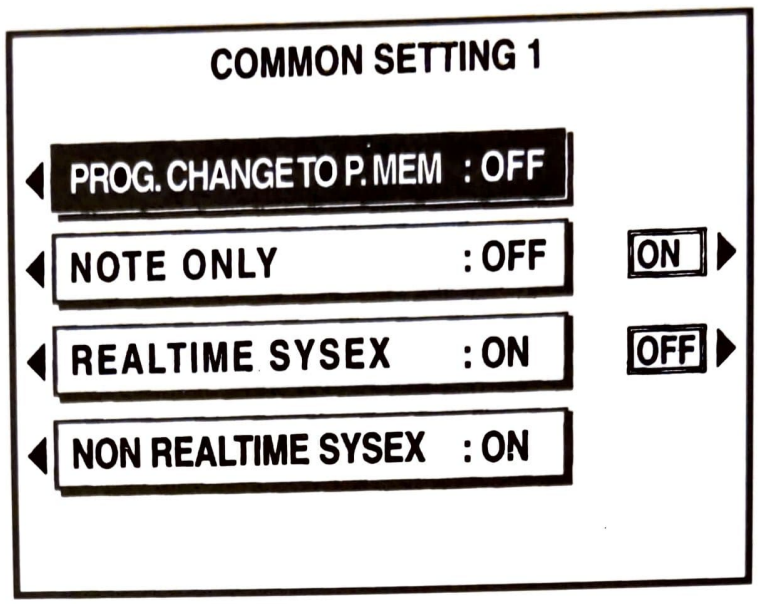
## 10.6.0 COMMON SETTING & P. MEM OUTPUT

Under this heading there are several sub-menus. Press the MIDI main menu button and select COMMON SETTING & P.MEM OUTPUT.


COMMON SETTING & P. MEM OUTPUT
SETTING 1
PROG. CHANGE TO P. MEM / NOTE ONLY / SYSEX
SETTING 2
AUTO PLAY CHORD CONTROL
SETTING 3
TRANSPOSE / DRUMS TYPE / SONG SELECT / SETUP LOAD
PANEL MEMORY LOCAL CONTROL
PANEL MEMORY PROGRAM CHANGE

# 10.6.1 SETTING 1

Let's start at the top select SETTING 1.




**PROGRAM CHANGE TO P. MEM** changes the way that Program Changes are received and transmitted on the Right 1 channel. With this function enabled Program Changes received will change the Panel Memory, allowing you to make complex changes with one Program Change. This might be useful if you were playing the KN2000 from a Technics Organ. You could set the Organs Panel Memory to do the same and thereby link the two Panel Memories together. By this example you can see that the Panel Memory also transmits a Program Change.

**NOTE ONLY** is a sort of master filter which stops the KN2000 transmitting or receiving anything that isn't a note.

**REALTIME SYSEX** enables or disables various functions which have a System Exclusive message that is sent in realtime. System Exclusive means that these messages will only be recognised by another compatible Technics product.

Various functions which do not have a recognised Midi controller number are sent with this format including Reverb On/Off and Rhythm Tempo (this means the actual tempo setting in beats per minute rather than Midi Clock). Other items covered by this function are Auto Play Chord mode and Intro, Fill-ins and Ending and Transpose (the actual transposition set)

Almost every panel button sends out a SYSEX message when you press it allowing an external sequencer to record every button push on the KN2000 even if it doesn't have a Midi control number assigned to it.

**NON REALTIME SYSEX** is data that is sent when the KN2000 is in a mode setting operation and cannot be played.

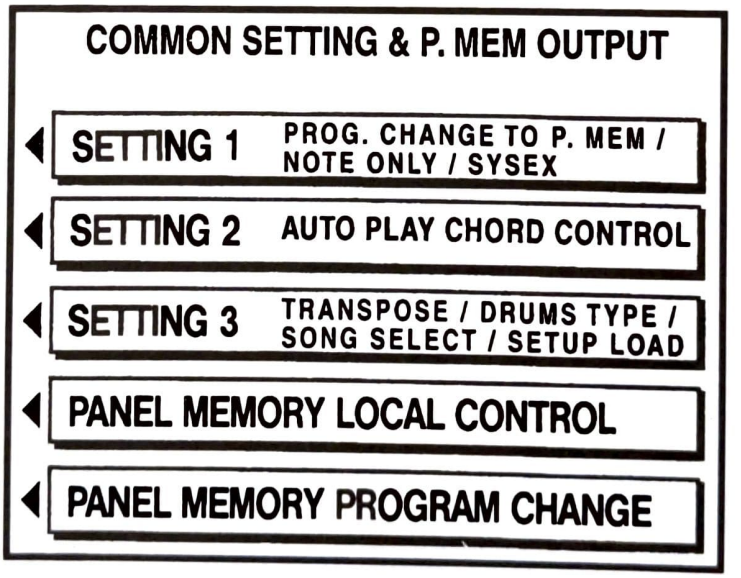
To make your settings use the ON/OFF buttons on the right-hand edge of the display.

## 10.6.2 SETTING 2 (AUTO PLAY CHORD CONTROL)

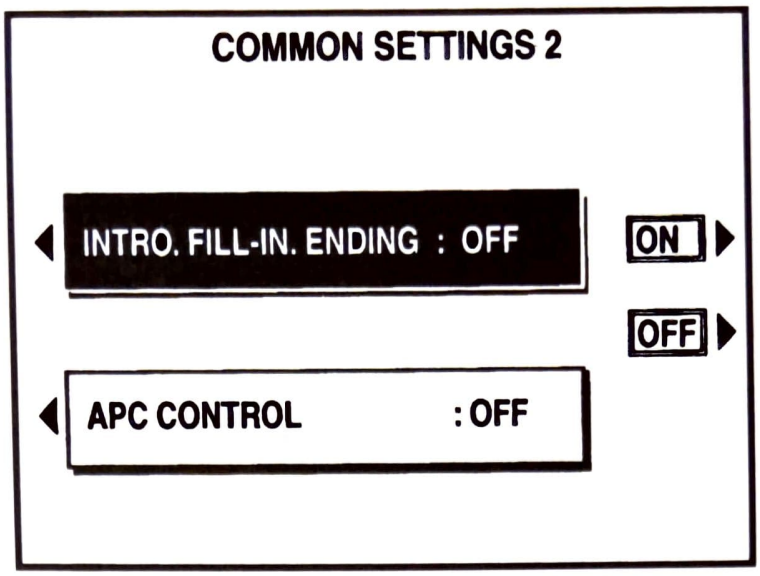
The KN2000 has some special messages relating the Auto Play Chord which come under the heading of Auto Play Chord Control. These are functions such as Auto Play Chord mode (One Finger, Fingered, Pianist, Memory and Dynamic Accompaniment) and Intro, Fill-ins and Ending.

If you were recording on an external Sequencer (such as a Computer) using Auto Play Chord, you would also want all of these functions to record (changes in APC mode and use of Intro, Fill-ins and Ending). Equally if you had two KN2000s linked together you might want the master unit to send this data to the slave.

Press the Midi menu button and select COMMON SETTING & P.MEM OUTPUT.


COMMON SETTING & P. MEM OUTPUT
SETTING 1
PROG. CHANGE TO P. MEM / NOTE ONLY / SYSEX
SETTING 2
AUTO PLAY CHORD CONTROL
SETTING 3
TRANSPOSE / DRUMS TYPE / SONG SELECT / SETUP LOAD
PANEL MEMORY LOCAL CONTROL
PANEL MEMORY PROGRAM CHANGE

Then select SETTING 2: AUTO PLAY CHORD CONTROL.




**INTRO, FILL-IN, ENDING** determines whether or not a Midi message is sent or received when you use these functions.

**APC CONTROL** determines whether the use of the APC mode buttons is transmitted and received.

## 10.6.3 SETTING 3 *TRANSPOSE*

**PROGRAM CHANGE TYPE**

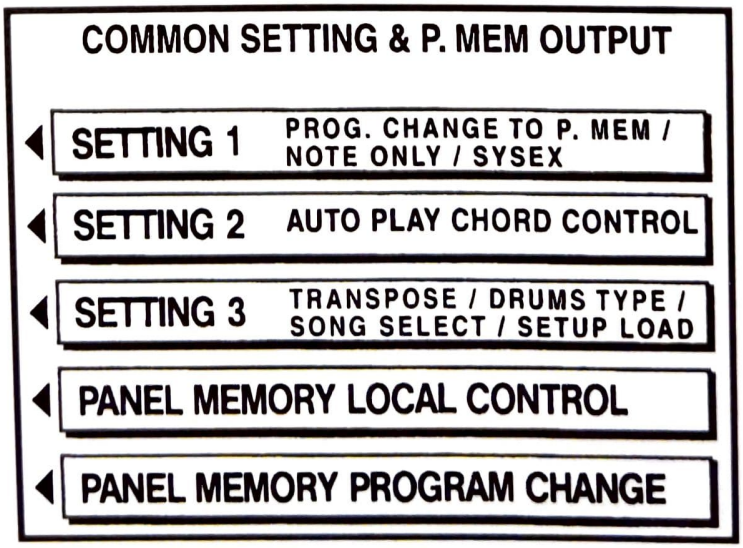
**DRUMS TYPE**

**SONG SELECT**

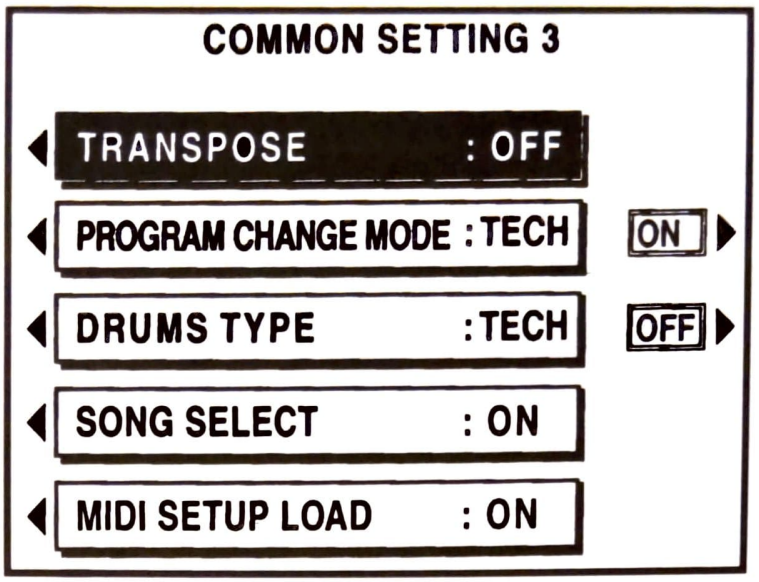
**MIDI SETUP LOAD**

COMMON SETTING 3 includes two settings frequently used for working with an external sequencer: PROGRAM CHANGE MODE and DRUMS TYPE. But as usual we will go through this page step by step.

Press the MIDI menu button and select COMMON SETTING & P.MEM.OUTPUT.


COMMON SETTING & P. MEM OUTPUT
SETTING 1 PROG. CHANGE TO P. MEM / NOTE ONLY / SYSEX
SETTING 2 AUTO PLAY CHORD CONTROL
SETTING 3 TRANSPOSE / DRUMS TYPE / SONG SELECT / SETUP LOAD
PANEL MEMORY LOCAL CONTROL
PANEL MEMORY PROGRAM CHANGE

Now select SETTING 3.




**TRANSPOSE:** With this function turned off the KN2000 will send the note that you are playing irrespective of the condition of Transpose. In other words if Transpose is set to Db (+ one semi tone) and you play a C, the note sounding from the KN2000 will be Db, but the note sent out over Midi will be C. If you set TRANSPOSE to ON the transposed note will be sent out over Midi.

You will probably find ON the most useful setting, although it is possible to set an interval between the KN2000 and the external device by setting TRANSPOSE to off. (Intervals of a fourth (transpose up to F) or a fifth (transpose down to G) are interesting especially with Brass and Synth sounds).

**PROGRAM CHANGE MODE:** A Program Change is typically a sound change, although it may be used for other changes, for example on the KN2000 changes in rhythm. The Midi system technically provides 128 Program Changes and as the KN2000 has 250 sounds this is obviously rather limiting!

NORMAL mode is a simplified program change mode in which not every sound is accessible. Basically each subsequent Program Change selects the next SOUND GROUP button from the bottom left button (MEMORY B) moving from left to right and then from the top left button (MEMORY A) moving from left to right. Whatever sound is set in each group will be selected.

As NORMAL mode is so simple, a more comprehensive mode is provided called TECH mode. This mode serves two very useful purposes. Firstly it allows you to access all 250 Sounds and 36 Sound Memories over Midi, and

secondly it is a standard Technics Program Change 'map' which is compatible with any other Technics instrument that is set to TECH mode. If you create a song on a Computer Sequencer using TECH mode, the same song played on another Technics product set to TECH mode will play with the same sounds.

TECH mode uses a special extension to Program Change called Bank Select which gives a series of variation numbers to each Program Change, so you can get more than 128 sound changes.

Setting the KN2000 the GM Program Change mode gives you access to 128 sounds specified in General Midi. This means that if you are playing a General Midi Standard Midi File on the KN2000 from an external sequencer the sounds intended by the software manufacturer will be selected.

A list of all of these Program Change numbers is provided in the supplement to the owners manual.

**DRUMS TYPE:** if you have created a drum sequence on an external sequencer, there are also three different ways that the KN2000 can receive the drum notes. These are what are known as Drum Maps. Within these three modes the way that drums are assigned to different Midi notes alters.

In NORMAL mode the Drum Map is the same as the Keyboard Percussion layout, so it is very easy to locate the different instruments.

However, the KN2000 has many more Drum and Percussion sounds in it's internal library and these are available by selecting TECH mode. As with Program Change this mode is standardised among all Technics instruments.

On the opposite page is a list of the available drums and the notes to which they are assigned in TECH mode

If you look at this list of drum sounds closely you will note that the choice of drum sounds is much greater than the one displayed on the keyboard. When listening to the preset patterns you may have asked yourself where this or that drum sound comes from as it was not displayed on the keyboard. The TECH drum map gives you access to all drum sounds inside the KN2000 via Midi.

Setting DRUMS TYPE to GM gives you the General Midi drum map, which is also not as comprehensive as TECH mode, so only use it if you are creating software in General Midi format.

| NOTE | INSTRUMENT | NOTE | INSTRUMENT | NOTE | INSTRUMENT |
|---|---|---|---|---|---|
| A#-1 | REVERSE CUP | A 2 | CONGA CRASH | A 5 | HIHAT ACCENT |
| B-1 | REVERSE SNARE | A#2 | YASHI CABASA | A#5 | HIHAT PEDAL |
| C 0 | CRASH CYMBAL | B 2 | COWBELL 1 | B 5 | BASS TOM |
| C#0 | CRASH CYMBAL 2 | C 3 | COWBELL 2 | C 6 | SHAKER ON |
| D 0 | RIDE CYMBAL 2 | C#3 | COWBELL 3 | C#6 | SHAKER OFF |
| D#0 | ---------- | D 3 | COWBELL 4 | D 6 | METAL CABASA |
| E 0 | RIDE CYMBAL CUP | D#3 | COWBELL 5 | D#6 | TIMBALES LOW |
| F 0 | WINDCHIME | E 3 | COWBELL 6 | E 6 | TIMBALES HIGH |
| F#0 | CHINESE CYMBAL | F 3 | SAMBA WHISTLE L | F 6 | ACOGO HIGH |
| G 0 | REVERSE SNARE | G 3 | SAMBA WHISTLE H | F#6 | ACOGO LOW |
| G#0 | SNARE DRUM 2 | G#3 | CLAVES | G 6 | TIMBALES H OPEN |
| A 0 | ELECTRIC TOM LOW2 | A 3 | HAND CLAP | G#6 | TIMBALES PAILA |
| A#0 | ELECTRIC TOM MID | A#3 | ---------- | A 6 | MARACAS ON |
| B 0 | ELECTRIC TOM HIGH | B 3 | ---------- | A#6 | MARACAS OFF |
| C 1 | BASS DRUM 1 | C 4 | TAMBOURINE ON | B 6 | TRIANGLE OPEN |
| C#1 | BASS DRUM 2 (LOW) | C#4 | TAMBOURINE OFF | C 7 | TRIANGLE MUTE |
| D 1 | SNARE DRUM 1 | D 4 | TAMBOURINE ACC | C#7 | LOW DRUM MUTE |
| D#1 | ELECTRIC SNARE 1 | D#4 | TAMBOURINE BEAT | D 7 | LOW DRUM OPEN |
| E 1 | SNARE DRUM3 (MID) | E 4 | GUIRO LONG | D#7 | VIBRASLAP |
| F 1 | TOM LOW | F 4 | GUIRO SHORT | E 7 | SAMBA WHIST SHRT |
| F#1 | ELECTRIC TOM LOW | F#4 | CUICA LOW | F 7 | SAMBA WHIST LONG |
| G 1 | TOM MID | G 4 | CUICA HIGH | F#7 | HH HALF OPEN |
| G#1 | ELECTRIC TOM MID | G#4 | CONGA MOF ON | G 7 | WOOD BLOCK LOW |
| A 1 | TOM HIGH | A 4 | CONGA MOF OFF | G#7 | WOOD BLOCK MID |
| A#1 | ELECTRIC TOM HIGH | A#4 | CONGA MUTE CRASH | A 7 | WOOD BLOCK HIGH |
| B 1 | RIM SHOT | B 4 | BRUSH LONG | A#7 | SCRATCH LOW |
| C 2 | HIHAT CLOSE ON | C 5 | BRUSH SHORT | B 7 | SCRATCH HIGH |
| C#2 | HIHAT CLOSE OFF | C#5 | ORCHESTRA DRUM | C 8 | HAMMER DELAYED |
| D 2 | HIHAT OPEN | D 5 | ORCHESTRA SNARE | C#8 | FLOOR TOM (GM) |
| D#2 | CRASH CYMBAL 1 | D#5 | ORCHESTRA CYMBAL | D 8 | TOM HIGH (GM) |
| E 2 | RIDE CYMBAL 1 | E 5 | BONGO LOW | D#8 | ---------- |
| F 2 | CONGA LOW | F 5 | BONGO HIGH | E 8 | ---------- |
| F#2 | SMALL CONGA LOW | F#5 | BONGO3 (MUTE) | F 8 | METRONOME 1 |
| G 2 | CONGA HIGH | G 5 | BONGO2 (MUTE) | F#8 | METRONOME 2 |
| G#2 | SMALL CONGA HIGH | G#5 | BONGO1 (MUTE) | G 8 | METRONOME 3 |

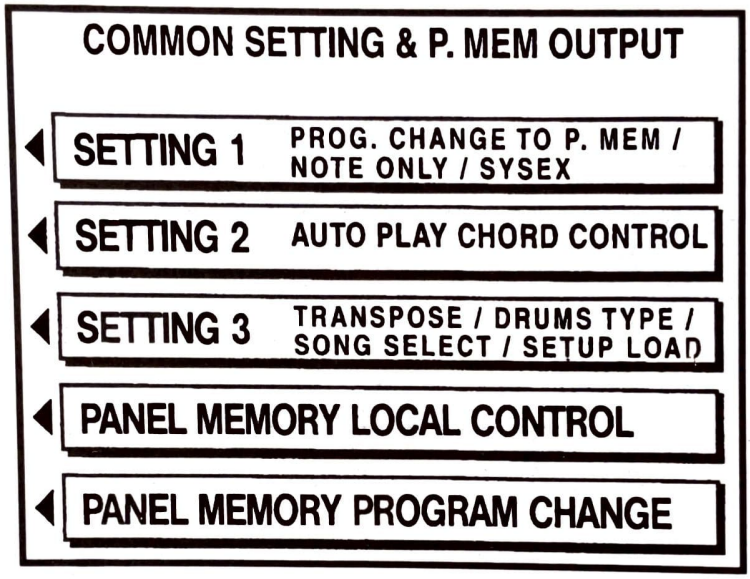
**SONG SELECT:** If you have two KN2000's linked together (for example) and each has a disk in it's Disk Drive, if SONG SELECT is turned on, the load command on the master KN2000 will also be sent to the slave KN2000. Assuming that the disks are related this could be very useful! For example you could have 16 tracks of sequencing on each instrument giving you 32 tracks in total, and if you were playing on stage you could load both disks with one command.

**MIDI SETUP LOAD:** If you have spent a long time setting up the Midi functions of your KN2000 you won't want to load a software disk and alter all your settings. So if you set MIDI SETUP LOAD to OFF the Midi settings on the disk will be ignored. It is of course also advisable to save your Midi settings on disk!

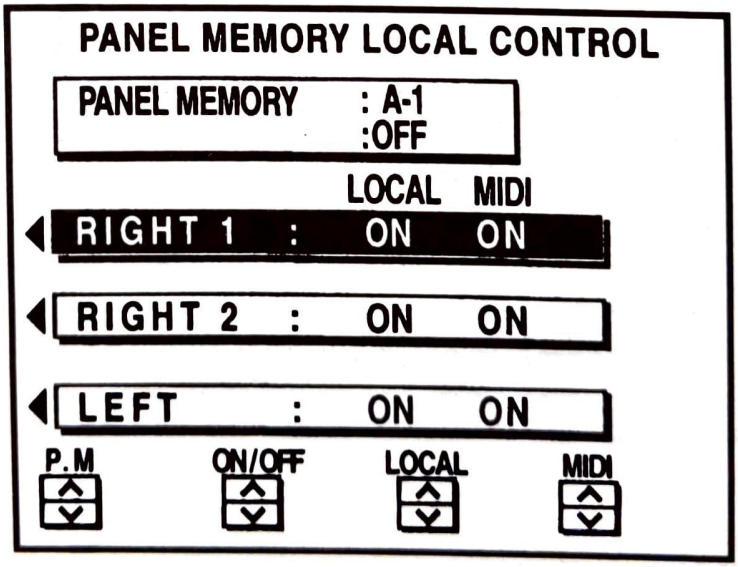
# 10.7.0 PANEL MEMORY LOCAL CONTROL

This chapter and the next deal with some very important MIDI settings for using the KN2000 as a master keyboard. Especially useful if you want to control several keyboards or sound modules from your KN2000.

Press the MIDI menu button and select COMMON SETTING & P.MEM OUTPUT.


COMMON SETTING & P. MEM OUTPUT
SETTING 1
PROG. CHANGE TO P. MEM / NOTE ONLY / SYSEX
SETTING 2
AUTO PLAY CHORD CONTROL
SETTING 3
TRANSPOSE / DRUMS TYPE / SONG SELECT / SETUP LOAD
PANEL MEMORY LOCAL CONTROL
PANEL MEMORY PROGRAM CHANGE

Then select PANEL MEMORY LOCAL CONTROL.




This function allows you to set for each Panel Memory whether the KN2000's sounds are played in the RIGHT 1, RIGHT 2 and LEFT, and whether Midi is transmitted from those parts. As the essence of Midi is to combine sounds from different instruments this allows you to decide for each Panel Memory and each keyboard part whether the sound is just the KN2000, just the Midi instrument or a combination of both.

## 10.7.1 Which Panel Memory?

The top most box in the display shows you for which Panel Memory the settings are being made (Eg: A-1) and whether the feature is enabled or disabled for that Panel Memory (On/Off).

To make the LOCAL On/Off and MIDI out settings work the selected panel memory has to be set to ON. ON/OFF functions as a master On/Off switch for the settings you make here. Use the ON/OFF switch at the lower edge of the display to turn the feature on.

## 10.7.2 Which Sound Sections?

The KN2000's Conductor has three parts, which are the parts that you can play on the Keyboard, Right 1, Right 2 and Left. The three lower boxes each represent one of those parts, and offer you the option of LOCAL On/Off and Midi transmission On/Off.

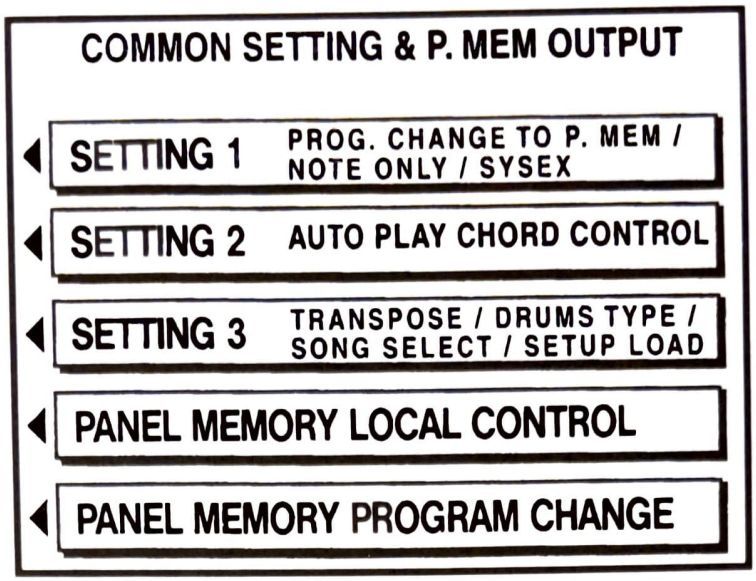
If in Panel Memory A-1 you set Right 1 to LOCAL OFF and Midi to ON, there will be no sound from the KN2000 on Right 1 when Panel Memory A-1 is selected, but data will be sent out over Midi so the external instrument will play from the Right 1 part. You could set Right 2 to LOCAL ON and Midi Off, so the sound from Right 2 will be the KN2000, but there will be no Midi transmission.

This feature offers you great flexibility with using an external instrument such as a module.

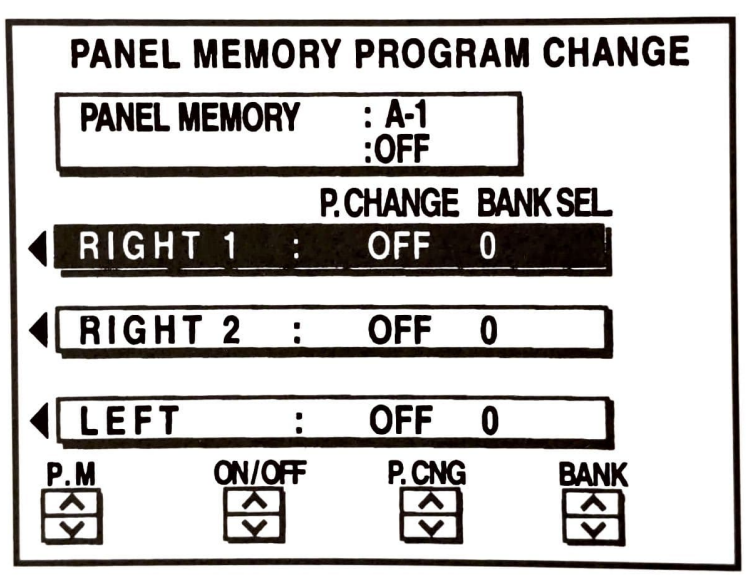
## 10.8.0 PANEL MEMORY PROGRAM CHANGE

One of the most difficult things to do from any keyboard is to select the sounds that you want on the external instrument. PANEL MEMORY PROGRAM CHANGE solves these problems because it allows you for each Panel Memory to enter a Program Change number for each part of the Conductor. So when you press a Panel Memory button, sounds are not only selected on the KN2000, but Program Change messages are sent to the external instrument to select it's sounds.

Press the MIDI menu button and then select COMMON SETTING & P.MEM OUTPUT in the LCD screen.


COMMON SETTING & P. MEM OUTPUT
SETTING 1
PROG. CHANGE TO P. MEM / NOTE ONLY / SYSEX
SETTING 2
AUTO PLAY CHORD CONTROL
SETTING 3
TRANSPOSE / DRUMS TYPE / SONG SELECT / SETUP LOAD
PANEL MEMORY LOCAL CONTROL
PANEL MEMORY PROGRAM CHANGE

Then select PANEL MEMORY PROGRAM CHANGE.




## 10.8.1 Which Panel Memory?

The top most box in the display shows you for which Panel Memory the settings are being made (Eg: A-1) and whether the feature is enabled or disabled for that Panel Memory (On/Off).

To make the PANEL MEMORY PROGRAM CHANGE settings work the selected panel memory has to be set to ON. ON/OFF functions as a master On/Off switch for the settings you make here. Use the ON/OFF switch at the lower edge of the display to turn the feature on.

## 10.8.2 Which Program Change from which part?

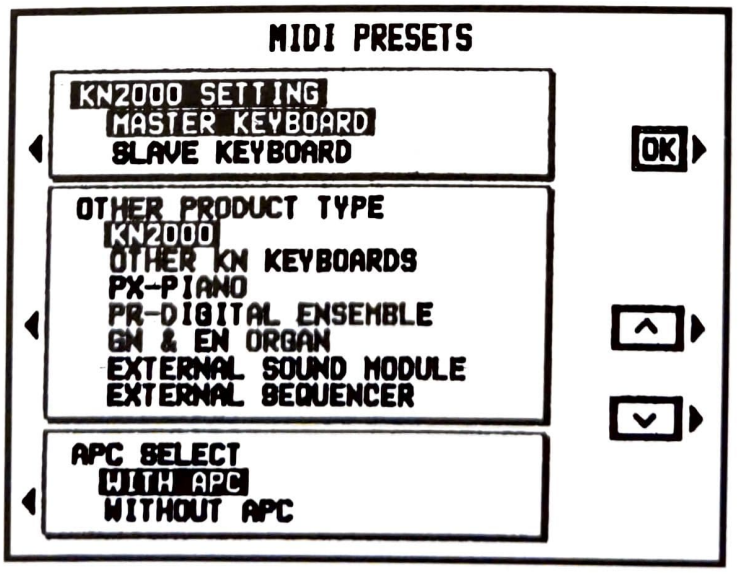
The KN2000's Conductor has three parts, which are the parts that you can play on the Keyboard, Right 1, Right 2 and Left. The three lower boxes each represent one of those parts, and offer you the option of setting a Program Change and Bank Select number for each, to be transmitted when you press the Panel Memory button.

The external product will have a list of it's Program Change numbers with it's owners manual. In some cases you will only need the Program Change number, not Bank Select, however many products now use Bank Select to extend the possible number of sounds available over Midi. An example of this is Roland's GS Standard format.

Use the P.CHG and BANK buttons at the bottom of the screen to input the required numbers. Try to think of the Panel Memory as the main method of integrating the external instrument into the KN2000, almost making it like one self contained instrument. Remember to store your settings on Disk!

# 10.9 MIDI PRESETS

MIDI PRESETS are a great help when using MIDI in connection with external equipment. MIDI PRESETS operate very simply and will give you a good starting point for your Midi connection. To use MIDI PRESETS press the MIDI menu button and select MIDI PRESETS.



The screen will provide you with three boxes giving you a multiple choice option for the following:-

**Whether the KN2000 is to be Master or Slave**

**What type of product you are going to use with the KN2000**

**Whether or not you want Auto Play Chord from the KN2000**

Select the options that suit your products and press OK in the LCD screen.

It is not possible to provide MIDI PRESETS that accommodate all MIDI scenarios and in every country we have to deal with special MIDI connections. Take a look at the enclosed disk on which you will find other MIDI-SETUPS which may be helpful.

When loading such a MIDI SETUP from disk all MIDI sections of the KN2000 will automatically be set to correspond to the instrument listed under the FILE name as well as possible via MIDI. Therefore, regard these MIDI SETUPS as a useful addition to the MIDI PRESETS.

---

## IMPORTANT!

**Remember that in the KN2000 "MIDI SETUP LOAD" (COMMON SETTING 3) has to be set to "ON". If not, no MIDI setups will be loaded. After the setup has been loaded switch "MIDI SETUP LOAD" to "OFF" so as not to change the present MIDI settings again by loading more software.**

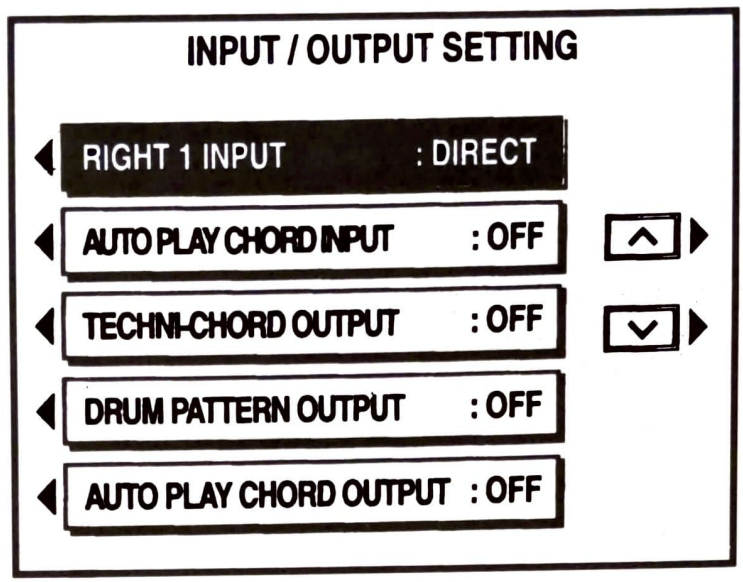
---

On the handbook disk you will find a range of Midi set-ups which can be used as a useful addition to the existing Midi presets found within the internal memory of the KN2000. In addition we have included some composer examples and Music Disk Collection tasters to help you along the way.

# 10.10 INPUT/OUTPUT SETTING

This section deals with whether the KN2000 sends certain data and how it handles certain data that it receives.

Press the MIDI menu button and select INPUT/OUTPUT SETTING in the LCD screen.


INPUT / OUTPUT SETTING
RIGHT 1 INPUT : DIRECT
AUTO PLAY CHORD INPUT : OFF
TECHNI-CHORD OUTPUT : OFF
DRUM PATTERN OUTPUT : OFF
AUTO PLAY CHORD OUTPUT : OFF

Here you find 5 boxes that can be selected with the buttons on the left of the display. To change the settings in the boxes use the Up/Down buttons on the right-hand edge of the display.

**RIGHT 1 INPUT** allows you to choose between two receiving modes: CONDUCTOR and DIRECT.

**DIRECT** makes the KN2000 function multi-timbrally, meaning that it receives on all 16 channels.

**CONDUCTOR** mode is intended mainly for using the KN2000 with a Digital Piano that does not have a split point. The KN2000 will receive data only on the Right 1 channel (channel 1 in it's initial condition) and will play from the Digital Piano in exactly the same way as on the KN2000. In other words if you have a keyboard split set with Right 1 and Right 2 on together, and a Left sound with Auto Play Chord, this is how it will play from the Digital Piano, putting the split point in the same position as on the KN2000.

**AUTO PLAY CHORD INPUT** allows you to set the Auto Play Chord section of the KN2000 to respond to Midi. If you wanted to play the Auto Play Chord accompaniments of the KN2000 from the lower manual of an Organ this function would have to be set to ON. You would also have to set the CHORD channel (under BASIC CHANNEL) to the same as the lower manual of the Organ, typically channel 2)

**TECHNI-CHORD OUTPUT** determines whether the Techni-Chord harmonies are transmitted over Midi. If this is set to OFF only the note that you are playing will transmit, which would be useful if you wanted to add just the top note of the chord from the external instrument.

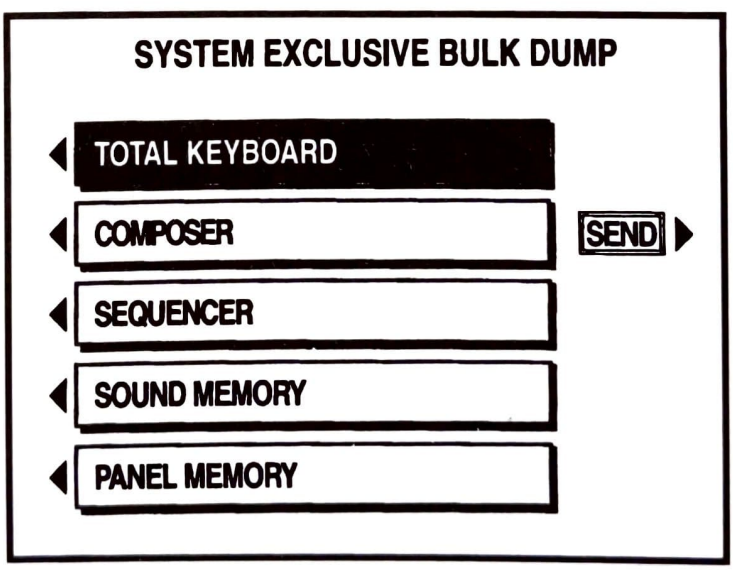
**DRUM PATTERN OUTPUT** allows you to enable or disable the transmission of the Drum pattern (preset or Composer) as note data over Midi.

**AUTO PLAY OUTPUT** allows you to enable or disable the transmission of the Auto Play Chord pattern as note data. You might want the KN2000's accompaniment patterns to play on the sounds of your external instrument, or to record the notes played into a Computer sequencer.

## 10.11 SYSEX (System Exclusive) BULK DUMP

A SYSTEM EXCLUSIVE BULK DATA DUMP is a bit like saving to Disk, but via Midi. Typically it would be used with a Computer Sequencer, Midi Sequencer or Midi Data Filer. You might also use it as a method of exchanging data between two KN2000's without using the Disk Drive.

Press the MIDI menu button and select SYSEX BULK DUMP.



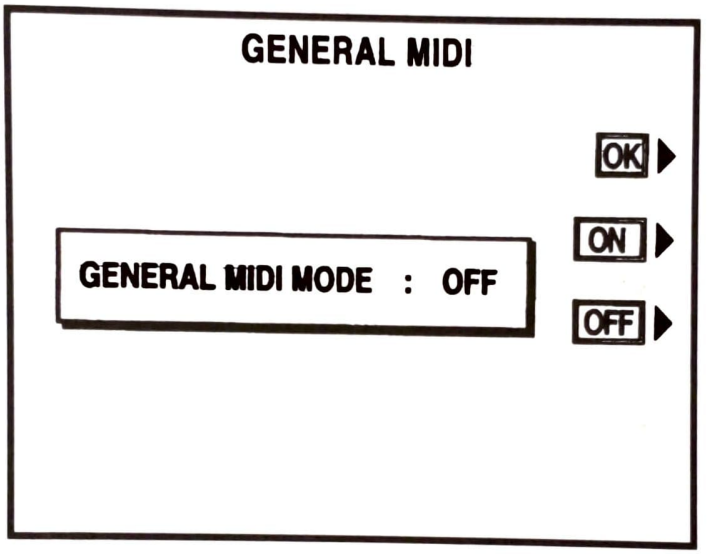

There are five Dump options, similar to saving to Disk. Select the desired option, put your receiving device into record and press the SEND button in the LCD screen. During this process it is not possible to play the KN2000. A progress report is given in the screen and the process is somewhat more long winded than saving to disk.

## IMPORTANT !

**To receive SYSEX data from an external instrument this KN2000-display must also be called up. Only SYSEX data that has been created on a KN2000 can be received.**

# 10.12 GENERAL MIDI

General Midi is a format agreed between all manufacturers which sets out a basic specification to which any instrument with the GM logo must conform. General Midi was conceived as a software compatibility format, which allows software producers to make Sequence software that will play with the correct sound selection on any product bearing the GM logo.




GENERAL MIDI has a Program Change list of 128 sounds and a Drum Map and stipulates certain other features such as a minimum number of notes playable simultaneously (24 compared to the KN2000's 64!), reception on 16 Midi channels simultaneously with Drums on channel 10, and certain important controllers.

The GM specification is somewhat basic compared to the potential of the KN2000. For this reason the KN2000 is not usually in GM mode. However, if you load a Standard Midi File Disk which is in GM format the KN2000 will automatically switch into GM mode. Equally if you play a song in GM format from a Computer or Data Filer there is a GM header on the song which will set the KN2000 in GM mode.

If you want to create your own material in GM mode you have to turn it on. Press the MIDI menu button and select GENERAL MIDI in the LCD screen. The KN2000 will offer you the option the turn on GM mode and will ask you to confirm, because selecting GM mode will initialize the keyboard.

# ATTENTION!

**Many of the KN2000's functions are not available in GM mode. These include Auto Play Chord and Sound Edit, because they are not relevant either to the GM format or to another manufacturer's product.**

## HINT!

*If you load a Standard Midi File song and you want to edit it in Technics mode (ie: using more than the 128 GM sounds or changing drum kit) you will find that turning GM mode off will also intitialize the entire keyboard, thereby losing the sequence. However, if you initialize just the Midi Settings (see* **8.0 INITIAL SETTING***) you will be able to retain the sequence but return to Technics Mode.*

TECHNI CHORD
BLOCK
BIG BAND BRASS
BIG BAND REEDS
OCTAVE
HARD ROCK
FANFARE
STEP RECORD: MELODY
TRACK: 1
BAL
ERS
REST
10 C4 V 75 NORM
MEAS NOTE VEL LENGTH PHRAS CURSOR
BGS BACKGROUND SOUND
BIRD
WAVE
RAIN
CHURCH BELL
APPLAUSE
FADE OUT
DEMO
ONE FINGER
FINGERED
PIANIST
MEMORY
DYNAMIC ACCOMP
CONTRAST
TRANSPOSE
TEMPO/PROGRAM
COMPOSER
RECORD MEMORY-A
RECORD MEMORY-B
MODE SELECT
COPY
LOAD SINGLE COMPOSER PATTERN
BEND RANGE
MAIN VOLUME
Technics
KN 2000